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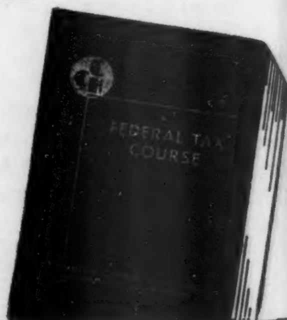

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The Accounting Review

VOL. XXXIII JANUARY, 1958 NO. 1

EDUCATION FOR BUSINESS: A DYNAMIC CONCEPT AND PROCESS*

THOMAS H. CARROLL
Vice President, The Ford Foundation

ECONOMIST Gerhard Colm has recently stated: "When Henry Thoreau wrote that Walden Pond offered him everything he needed, the United States had a population of about 23 million. In 1975 we expect a population almost ten times as large. To provide a reasonable degree of comfort for more than 220 million people requires a large and growing amount of production. Emphasizing the need for material good is not materialistic as long as we recognize that production is not an end in itself but is useful only in support of a dignified life for a free people."[1]

It has been estimated recently that more than one-third of today's gross national product of the United States is attributable to research and development of the past ten years. As one example, it is reported that Radio Corporation of America attributes four-fifths of its current sales volume to products that did not exist a decade ago.

These observations help set the stage to consider the subject, "Education for Business: A Dynamic Concept and Process." Unquestionably, there are forces acting to change our industrial society, and the rate of change has been increasing in recent years. "Progress" and "change" are not synonymous. But it is difficult to conceive of progress without some change. We need not only new ideas and concepts. We need more effective and useful combinations of those we already have.

The Ford Foundation, with which I am associated, is substantially an educational enterprise. The Foundation has made grants principally, though not exclusively, to support the work of faculty members, research personnel, and students in colleges, universities, and research institutions. Our program in Economic Development and Administration comes under my so-called "initial cognizance." In order to insure against too academic an approach, we have invited leading men of affairs to meet with us from time to time. From these non-academicians we solicit advice on the directions in which the program has been moving and on the problems to which they believe we should give future attention.

At one of these recent meetings, the able top executive of one of America's large corporations suggested seriously that "the training for business given on the campus—particularly at the undergraduate level—tends to spoil the kids for business." College students, he said, need to get broader, more liberal educational back-

* Address delivered at Accounting Hall of Fame Award Banquet, Ohio State University, Columbus, Ohio, 16 May 1957.

[1] Colm, Gerhard, "America 1975: Income" *Challenge*, April, 1957.

ground; the business firm, he added, is a better place to learn the "how-to-do-it" techniques. There was no dissent among those present.

Professors and administrative officials of schools of business are, of course, accustomed to slighting remarks by "unworldly souls" in academic life who may regard business as not quite "respectable." But these were hardheaded, successful business executives who are active also in educational affairs and who devote a surprising amount of time in reflection on optimum education as preparation for business.

Their opinions are not novel. Indeed, it apparently has become fashionable for corporation executives to stress in public speeches the value of a broad, liberal education for a business career. Yet, the people who actually recruit college graduates for positions in the same corporation seek persons with narrowly specialized training. This is particularly the case—and understandably so—for companies that do not offer special training programs for college graduates and other potential executive material but recruit instead for specific positions. In his provocative book, *The Organization Man*, William H. Whyte wryly observes: "Between 1953 and 1956, the number of business speeches bewailing over-specialization increased. So did the demand for specialists."

There is clearly a need for systematic study of the basis on which businessmen actually hire and promote within their organizations if one is to develop a workable—though certainly not *the* unalterable and universally acceptable—answer to the question: What *is* optimum education for business competence and responsibility?

Although historically the major foundations have not given any significant support or even much attention to business and educational preparation for it, two of the three largest foundations have recently addressed themselves specifically to this problem. The Carnegie Corporation has made a grant to Swarthmore College under which Dr. Frank Pierson, Professor of Economics, will head a study of business education. This is one in the series of studies of professional education supported by that foundation. The Ford Foundation has been giving serious thought and consideration to this area since early 1954. Last fall, it appointed to its staff Dr. R. A. Gordon, Professor of Economics at the University of California (Berkeley), who will direct a study of education for business while on leave of absence from the University. He will make a report primarily for the Foundation's internal use in helping to guide its activities in the field of business education.

Impressed with the need for relating the objectives and educational methods of the schools to the requirements of business and society Dr. Gordon's group is devoting a large part of its attention to the character of the market being served by the business schools. They have come across several "gold mines" of relevant data on the effect of educational background on "business success" that have been collected by several firms. Much of the ore from these mines is still to be assayed.

For example, in one company all employees at a certain management level were subjected to exhaustive interviews by a staff of management consultants. The same procedure was applied to a group three salary levels below them. By pairing people of similar lengths of service, an attempt is being made to determine the qualities that caused some people to rise faster than others. It will be interesting to see if educational factors can be isolated from the mass of data available and if meaningful implications for changes in business education can be drawn.

As a result of a hard look at the organization and functioning of the business

firm, Dr. Gordon's group hopes to emerge with a fresh image of the range of activities and responsibilities involved in "business." Everybody in business education "knows" or thinks he knows what business is all about. But how valid is each picture? For example: Is business a profession? What are the similarities and differences between business and the traditional professions and what are the implications for "professional" education for business? What about the importance of the "management" function? Should education for management be the central theme of business training at the college level? At the graduate school level? Or does this emphasis merely produce graduates with delusions of grandeur, who are disappointed if they do not become vice presidents within a short period?

Many important educational issues hinge on the answers to questions such as these: What kinds of business training seem best for specified purposes? What are the relative merits of generalized versus specialized training? What is the optimum amount and kind of liberal arts education for the businessman? What is the place of the social sciences in business education? What is the relative importance of personal qualities? In what ways can the schools identify and develop them?

By focusing on that part of the curriculum expressly designed to train for business competence, Dr. Gordon and his associates hope to shed new light on a number of factors. Among them are: the relative emphasis to be placed in the curriculum on business administration as applied social science compared with applied economics; the value of practice in simulated decision-making as opposed to the gaining of fundamental knowledge and techniques to aid the decision-maker; and the effect of external environment on the firm as opposed to an emphasis on internal operations.

Dr. Gordon's group will devote some time to investigating the varieties of education for business presently offered in the colleges and universities. They will rely for much of this information, however, on the Swarthmore study, which will emphasize a detailed survey of current practices in business education.

It is certain that all these investigators will find business education in anything but a quiescent state. While in some quarters business subjects have been taught in the same way and in the same curriculum for a number of decades, other places are full of new ideas and new experiments.

I should like to report on a few of the developments, diverse in direction, but all encouraging in that they are evidence that business education has at least some part of the dynamic quality of American business enterprise itself. No one of these, in my opinion, represents *the* best approach that all others should emulate. But they all offer creative ideas for possible local adaptation at other schools. In general, these developments represent a movement away from a series of more or less unrelated, narrowly vocational courses offering descriptions of more or less current business practice. The encouraging movements have been in the direction of fewer, broader, and more closely integrated courses.

One of the most influential forces in modern education for business is the clinical approach to administration. This is typified, of course, by the case method pioneered at the Graduate School of Business Administration at Harvard and adopted either largely or in part at numerous other business schools, both graduate and undergraduate, at home and abroad. There are, in fact, few institutions where at least some of the courses do not employ the case method. The "case" is not used merely as an illustration of business prac-

tice but as a device to subject the student to the type of intellectual process that it is assumed he will be called upon to perform in the business world: the process of arriving at decisions after consideration of complex data that must first be sorted out from a welter of irrelevant information.

Use of the case method in business administration teaching is hardly new any longer. But there is a recent movement toward a decentralization of case gathering activity. At more and more institutions, faculty are going out into the field, developing their own cases, and absorbing at first hand the flavor of actual business operations.

This development has been aided by a summer seminar at the Harvard Business School to which faculty members of schools of business throughout the country are selected for intensive training under fellowship appointments in case research, case writing, case teaching, and grading. An active "alumni association" of participants in the program, which is now going into its third year, is working on plans to set up a national clearing house mechanism for the exchange of original cases and for encouraging this activity at their home campuses. It is axiomatic that the professor who is involved in this field work and in the writing of a case based upon it is a better teacher of cases than he was when he used only the case products of others.

It is interesting to observe, incidentally, the extent to which centers of instruction in business administration throughout the world look to the case method as a promising way of introducing training in business administration in places where none has previously existed. For example, at Lille in the northern textile district of France, at the University of Istanbul in Turkey, at Turin in the industrial heart of Italy, business educators are actively engaged in preparing "home grown" cases, which, of course, suit their needs better than translations of American cases.

Another important—and considerably newer—development in modern business education is the school that directs itself toward disciplines underlying business administration, i.e. the social sciences primarily, but the physical sciences and mathematics as well. These schools emphasize business as a profession and seek to steer education for it along the general lines of other professional education.

A comparison with the evolution of medical education is illuminating. During the 19th century, except in the Germanic countries, medical practitioners taught in hospitals under an apprenticeship system. Observation of practice and subsequent discussion proved effective in preventing what Dean Allen Wallis of the University of Chicago has described as "new kinds of errors." It is his contention, however, that "this system did not promote the discovery of new truths or of a profound and growing understanding of health, disease, and therapy."

In contrast, Germanic medical education was carried on in the universities under professors. Thorough grounding in the pre-clinical sciences of anatomy, biochemistry, pathology and physiology was a prerequisite for clinical training.

Certain influential business educators regard social psychology, cultural anthropology, sociology, mathematics, and statistics, as well as economics, as the business analogues of the medical students' anatomy, biochemistry, pathology, and physiology. Rather than devote most of the professional curriculum either to a description of business practice or to tackling business problems via the case method, these educators would concentrate on training in the so-called behavioral sciences and on mathematics and statistics. It should be noted that these methods are *not* mutually exclusive. Indeed, Harvard has established the first research professorship in a business school that is to be filled on a rotating basis by behavioral scien-

tists. The objective is to make generally available to the faculty knowledge of the applications of the social sciences to their own fields.

There are schools of business vying for leadership in this approach that actually boast of the small proportion of their faculty with traditional training in business administration. One such school with over forty full-time faculty members has only five who received graduate training in business schools. One business school dean states baldly that he is out to hire outstanding social scientists whether or not they have previously interested themselves in business problems. The primary emphasis is on their proved ability as social scientists and the secondary emphasis is on their expressed interest and desire to work with problems of business.

There is danger of going to extremes in emphasis on the underlying disciplines and thus giving up all connection with relevant business experience. An ultimate result could be a so-called school of business indistinguishable from departments of social science, with no *raison d'etre* as a separate professional school.

Without exception, those educational leaders who stress the underlying sciences are research-oriented. This is a significant fact. A practicing profession does not make substantial forward strides through the perfection of minor procedures, but through scientific discoveries and new insights which sometimes seem of little immediate relevance to current practical problems.

In talks with business executives, one often hears that "business schools are twenty years behind modern business practice." Are there so many teachers of business subjects who content themselves with explaining business practices as they have read about them in textbooks written some years ago by other academic persons as to justify this accusation? Or is this a serious overstatement of the fact? I repeat what I have said elsewhere: "The increasing public aspects of private business and the increasing need for managing economic forces point forcefully to a community of interest between academicians and managers. Changes in the area of management could—and should—result more typically from work initiated by the academic mind and developed with the cooperation of policy-makers. Such results cannot be reasonably expected, however, if men in academic life are proceeding on unfounded hunches or outdated facts about the administrative world."

Let me describe some aspects of the research program of one leading business school that cannot be accused of running twenty years behind business. In fact, its most distinguished original thinker refers to some of his research as "Buck Rogers stuff."

The general research strategy at this institution is to seek out important management problems but not to tackle the problems in terms of their surface manifestations. Instead, an effort is made to fill gaps in the fundamental knowledge necessary to solve the basic, underlying problems. For example, in an effort to understand how decisions are made in a business firm, these researchers are trying to develop an "empirically testable theory of human higher mental processes" by using large-scale computers for simulation and study of human thought processes. In other words, people in a business school are developing a "thinking machine" for the purpose of devising and testing a new body of theory about the nature of human rationality in complex situations. This machine is already capable of playing chess and proving theorems in symbolic logic. By studying how the machine "thinks," the researchers hope to reconstruct the thought processes that we call judgment.

This theoretical approach is complemented by down-to-earth field study of actual decision-making processes in business organizations. In order to follow

through a single complete policy decision, one or two staff members are assigned full time to an organization for prolonged periods. The enormous body of data obtained in this way is then translated into forms needed to make it relevant for possible generalization and theory.

The research tradition has been weak if not lacking in many—perhaps most—schools of business. This has been brought home to us in the Ford Foundation through the faculty research fellowship program in economics and business administration, which has been functioning on an experimental basis.

Of thirty-four research fellowships to be awarded for the coming academic year, six, or about 17.5 per cent, will go to business school faculty; the remaining twenty-eight will go to members of departments of economics. Under the system of nominations developed for this program, twenty-nine schools of business and sixty-two departments of economics were invited to name one candidate each. On a proportional share basis, therefore, one might have expected that about one-third of the fellowship awards would have gone to the field of business administration.

In making the selections, the Foundation's staff was assisted by the ratings of a five-man, outside screening committee consisting of three members of business school faculties—a professor of finance, a professor of transportation, and a professor of industrial management—and two members of faculties in economics. The committee rated the nominees on the basis of the quality of research proposals submitted as well as on each candidate's reputation and/or promise for productive research. It must be emphasized, however, that some of the business school research proposals and people were outstanding. Of the three fellowship nominees rated highest, two were from business schools.

One frequently hears as explanation for lack of research results that business school faculty members properly devote their time to teaching and consulting work and, therefore, have neither time nor need for research. This attitude has been forcefully challenged by Dean Allen Wallis, who states:

> That faculty which is most capable of productive research is that faculty most capable of effective and respectable pedagogy. Furthermore, unless a student studies in an atmosphere in which research is going on he is likely to become too sure about his answers and unaware of the pervasive challenge offered by our vast ignorance. Although a single teacher may do well even if he is not engaged in research, his work is likely to diminish in vigor unless he operates in a setting in which he is surrounded by unsolved questions and efforts to solve them.

Closely allied with the emphasis on the underlying behavioral sciences and mathematics is an increasing concern with the need for better work in the liberal arts. This need is generally recognized by educators concerned with professional training, whether it be business, medicine, law, or engineering. The discussion in a study of the role of general education in engineering, recently published by the American Society for Engineering Education,[2] is as germane to business education as it is to engineering. While this report recommends extensive work in the humanities and the social sciences for engineers, it tempers its recommendation with this astute observation:

> An overstatement of what may reasonably be expected from the humanities and the social sciences may be dangerous. Implied in some of the glowing statements the committee has examined is a faith that a few courses in the humanities and the social sciences can provide health and emotional adjustment, personal and social success, clarity of thought, moral integrity, civic responsibility, aesthetic sensitivity, professional vision, and, in general, a kind of serenity and wisdom

[2] "General Education in Engineering." A Report of the Humanistic-Social Research Project, The American Society for Engineering Education, 1956.

that we had thought was reserved for Providence alone.[3]

Another type of training for business is becoming increasingly visible: training generally given within industrial engineering departments and centered around operations research. Under such programs, heavy emphasis is placed on basic mathematics, probability theory, and other topics designed to provide skill in the use of new mathematical tools for so-called "scientific" decision-making.

This development is particularly encouraging when it replaces the traditional industrial management or administrative engineering sequences in engineering schools which have tended to constitute a rather disorganized hodgepodge of courses, some in basic engineering and some descriptive of business functions and practice. Here, as in all lines of endeavor, there should be a suitable academic division of labor along lines of talent and interest.

What has all this to do with accounting?, it may be asked. It is relevant because it relates to accounting education.

Recently I had lunch with a tough-minded, outspoken executive of one of our largest corporations. "You know," he said, "I've concluded reluctantly that our accountants are only good for bookkeeping operations. They're not trained to look behind the dollars and come up with the relevant data." By contrast, he emphasized the ability of economists, statisticians, and operations research people to handle data effectively and produce meaningful answers. His charges may be too harsh for his own large company, let alone for any broader generalization.

But certainly the accountant who is to play a part in the planning of future activities of a company must be conversant with the powerful tools of data analysis being developed by practitioners of other disciplines. Roger R. Crane, former director of operations research of a manufacturing concern and now director of management sciences in a national public accounting firm, recently addressed himself to the place of operations research in industry.[4] He wrote in part as follows:

> . . . One point is evident—the operations research scientists should look carefully at the function of the controller at least as a department with many common interests and as a source of essential basic data on operations, and, conversely, the controller should follow carefully the development of this new activity to assure himself that he is utilizing it to his greatest advantage.

Turning to the public accounting profession, it is gratifying to note that the findings of the Commission on Standards of Education and Experience for Certified Public Accountants,[5] on which I was privileged to serve as a layman, are entirely consistent with the development in business education I have been describing.

The report states that "the typical CPA has been considered as having his nose in a ledger or digging feverishly through piles of musty documents. Actually he is much more likely to be [and certainly should be] concerned with problems of communication, the exercise of considered judgment." With this in mind, the Commission has recommended as its ultimate goal for optimum training for Certified Public Accountants a professional postgraduate program that would be designed to follow an undergraduate curriculum concerned principally with cultural and "liberal" subjects. Accounting instruction on the undergraduate level would be restricted to basic courses in principles, leaving to post-bachelor programs the specialized and professional aspects of preparation for public accountancy. This particular recommen-

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[3] *Ibid.*, p. 5.

[4] Roger R. Crane, "Operations Research in Industry," *The Controller*, March 1957, p. 121.

[5] *Standards of Education and Experience for Certified Public Accountants* (Ann Arbor, 1956), p. 19.

dation was accepted without dissent by all members of the Commission. The Commission included not only professors of accounting and educational administrators but members of some of the nation's leading public accounting firms as well.

The only dissent among the Commission, incidentally, was on the question of an experience requirement for the CPA designation. The Commission's majority would drop the experience requirement in favor of at least five years of university-level instruction to be followed by the uniform CPA examination, while the minority group believes that a number of years of experience should be required before the CPA designation is actually awarded. This dissent is noteworthy because it is based upon the opinion that academic work cannot be considered sufficient preparation for professional competence, that it merely can prepare a graduate to be receptive to—and profit from—the teachings of experience. If this be true, is it not quixotic for educators to develop a highly technical and vocational program to fit a man to be an accomplished professional upon graduation? It would appear to make much more sense to focus on the underlying fundamentals.

Public accounting has already established itself as a recognized profession. It has the opportunity now to contribute toward the development of business education in general along truly professional lines.

The dynamics of our contemporary industrial civilization would seem to present an almost unparalleled challenge to educators—both in the liberal arts and in the professional fields. As President John Gardner of the Carnegie Corporation has so well stated: "If the traditional liberal arts fields are to recapture their proper role in our undergraduate education, it will not be by scolding the technologists—but by making the liberal arts an indispensable and enviable experience." Similarly, if the level of professional business education for competence and responsibility is to be elevated, both in teaching and research, there must be soul-searching and hard work on the part of business school faculties.

COMMENTS ON "ACCOUNTING AND REPORTING STANDARDS FOR CORPORATE FINANCIAL STATEMENTS—1957 REVISION"*

GEORGE J. STAUBUS
Assistant Professor, University of California, Berkeley

"ACCOUNTING and Reporting Standards for Corporate Financial Statements —1957 Revision" is of great interest to all who are concerned with the development of accounting thought. Surely, no one will find it faultless; likewise, few will consider all efforts of the Committee on Concepts and Standards wasted. Between these extremes there is much room for discussion of the statement. If public discussion does not result, a valuable possible contribution of the Committee's work will be lost. The statement is certain to cause its readers to think about accounting concepts and standards. This desirable objective will be multiplied if their thoughts are shared so they can interact. Some of the thoughts of one reader are presented in the following paragraphs.

The simplest general conclusion that the author reaches is that the 1957 statement is an improvement over the previous edition. As a whole, the report is very encouraging; the Committee should be thanked and commended. Specifically, the following points of improvement will be discussed in this paper:

1. Recognition of the concept of discounted future cash movements is a major contribution to the current statement and augurs well for future discussions of asset and liability measurement, both within AAA Committees and in other quarters.
2. Distinguishing between monetary assets and non-monetary assets paves the way for several possible desirable developments in accounting practice.
3. Expenses and losses are defined so that neither includes the other.
4. The Committee sets forth three sound objectives of the measurement of cost of goods sold, thus encouraging the discussion of means of accomplishing objectives rather than LIFO-FIFO arguments in a vacuum.
5. The notorious paragraph (5) under expense in the 1948 statement was eliminated.
6. The Committee's discussion of equities de-emphasizes the nominal distinction between debts and ownership equities and recognizes residual equities.

The current report does not move backwards in any significant respect, although the vagueness of the scattered material on asset measurement would require that the discussion of that subject be so classified were it not for specific improvements mentioned above. Nevertheless, the author would like to discuss six areas in which the Committee's failure to make progress is disappointing, in the hope that some readers will be stimulated to give additional attention to these matters before the formulation of another comprehensive statement by the American Accounting Association.

1. If the Committee had started the report by identifying the users of corporate financial statements and had followed this step with a listing of the major problems of those users and a discussion of the informational needs of one group of users (investors), the entire document probably would have been more closely oriented to the reasons why accounting is done.
2. The absence of a definition or generalized discussion of cost is a major defect in the statement.
3. The Committee's discussion of revenue is a definite weakness in the report.
4. A definition of gain is needed just as much

* The reader of these comments should have at hand a copy of the recent booklet entitled *Accounting and Reporting Standards for Corporate Financial Statements and Preceding Statements and Supplements* (Columbus: American Accounting Association, 1957). All quotations not identified in footnotes are from that booklet.

as a definition of loss, a term that was defined.

5. The scattering of comments on asset measurement throughout several sections of the report presents a nearly impossible hurdle to the reader who wants to obtain a clear impression of the Committee's position on this vital subject.
6. The statement is inconsistent with regard to the inclusion in, or exclusion from the income computation of charges or credits that are only slightly related to the period in which they are recognized. The 1948 report included a clear but unsatisfactory statement on this subject.

In addition to recognizing notable improvements in the current report when compared with the 1948 version and criticizing continued weakness in several portions of the document, the author will discuss three aspects of the report that leave indecisive feelings.

1. The realization paragraph and other references to realization show both progress and confusion.
2. The dual approach to income has its good and bad points.
3. There is some doubt whether or not the Committee's objectives were the most appropriate that it could have chosen or been assigned.

COMMENDATIONS

The Committee is to be commended for a number of improvements that may be noted by comparing the current statement with the 1948 version.

Concept of Discounted Future Flows

The first two sentences in the measurement portion of the asset section of the statement deal with a standard in the sense of an ideal against which all practices can be measured. "The value of an asset is the money-equivalent of its service potentials. Conceptually, this is the sum of the future market prices of all streams of service to be derived, discounted by probability and interest factors to their present worths." This idea is also expressed in the last paragraph of the money measurement portion of Section II. The presentation of this ideal approach to the measurement of assets in the 1957 revision suggests that the next version of the "Statement of Concepts and Standards" may give some explicit attention to a list of alternative measurement techniques ranked in the order of their proximity to the ideal. When this is done, the measurement section of the statement will present a real challenge to the profession. The Committee can hardly be criticized for not following up the concept of discounted future flows in view of its avowed intention of suggesting "standards to which general-purpose reports . . . should conform." The difference between an attainable standard to which practice should conform and an ideal standard by which two possible practices may be compared is very important to the working accountant. If the Committee were to present the latter type of standard when it claimed to be aiming at the former, much confusion would be inevitable.

Monetary and Non-monetary Assets

The distinction between monetary assets and non-monetary assets which the Committee observed in the measurement portion of the asset section is another improvement which is primarily valuable for the potential it presents. If future versions of the statement emphasize the circumstances permitting the use of alternative measurement techniques, the distinction between monetary and non-monetary assets will play an important role in the discussion. It is likely that this distinction will be extended to equities and will play a role in the definitions of revenue and expense before very many years go by. Eventually, the distinction between money value items and real value items (to mention alternative terms for monetary and non-monetary) may be considered more important than the short-term-long-term

basis of classification of assets and equities. If any of these possible roles of the distinction between monetary and non-monetary assets develops, the Committee that wrote the 1957 revision should receive a great deal of credit.

Distinction Between Expense and Loss

The fact that both expense and loss are defined, thus permitting the reader to distinguish between them, is not new. The 1948 statement described expense and loss clearly enough to permit different use of the two terms.[1] The new feature is the separation of expense and loss. In 1948, expense included loss and operating costs. Now, expired costs include expenses and losses as separate sub-categories. Operating costs have been replaced by expenses, and expenses have been replaced by expired costs.

The unsuitability of the operating costs designation in the 1948 statement was clear. The common usage of the term operating costs to include the *costs charged to manufacturing* as well as the costs charged to selling and administrative functions conflicted with the Committee's use of operating costs to include *cost of goods sold* and selling and administrative costs. It is now clear that expenses and losses are two types of costs. Operating costs are another type which includes some expenses and some costs carried forward in inventory, although the term was not given a definite role in the new statement.

One potential advantage of the separation of the concepts of expense and loss is that losses will be recognized as generally non-recurring and, hence, of much less informative value to the reader who is attempting to predict changes in net worth (income, etc.). Correspondingly, the distinction between revenues and gains is likely to be recognized in some future statement of accounting and reporting standards. Pulling losses and gains out of the pale of expenses and revenues is desirable not as much for the purpose of focusing attention upon the former as to purify the latter. Revenues and expenses will be recognized as more valuable bases for predictions when they are limited to recurring types of events (and when accrual-deferral techniques are improved so as to reduce the impact that erratic or irregular cash receipts and disbursements have upon the income statement).

Three Objectives of Measuring Cost of Goods Sold

The three ideal objectives of measuring cost of goods sold offer the reader useful criteria by which he can appraise any inventory-cost of goods sold measurement method. This is a definite improvement over the previous edition of the statement in which the Committee's opinion on this subject was that it was "acceptable to assume a flow of the cost of inventoriable items, for example, 'first in, first out'." The current statement clarifies the advantage of LIFO for reporting current costs of goods sold or used and the advantage of FIFO for measuring inventories at reasonably current costs. This clarification should point the way to the use of LIFO for measuring the charges to operations and the use of FIFO for measuring the inventories with the adjustment at the end of the period being charged or credited to the price change gain or loss account. The accomplishment of the three objectives without sacrificing objectivity should be so appealing as to merit definite recognition of the LIFO-FIFO method in the next statement of accounting and reporting standards. That recognition could not occur without the prior acceptance of the three criteria of an inventory-expense method as suggested in the current statement in the form of objectives.

[1] First paragraph under *Expense* (p. 15 of the 1957 booklet).

Elimination of Item 5 under Expense

Item 5 under *Expense* in the 1948 statement is the paragraph that suggested that errors of judgment in assigning costs to expense should not be subject to reversal in later periods; only mechanical errors should be corrected in the period of their discovery. This idea that some errors in income determination should be corrected by opposite errors in subsequent periods without any special attention being given to the problem (i.e., by automatic "washing out") probably is not very popular now. The Committee on Concepts and Standards revised that paragraph in 1953, but the revised opinion was not presented in the current statement. The reader who is not convinced that this change in the statement is an improvement is referred to Professor Paton's strong argument to the contrary[3] and to Supplementary Statement No. 5.

Position on Classification of Equities

The interesting aspect of the Committee's position on equity classifications is that it implies that some preferred stock, especially shares that have a cumulative dividend preference and a liquidation preference but which are not convertible, should be classed as creditor interests. The vagueness of the discussion in Section V does not permit the reader to be certain of the Committee's intention, but a careful perusal of the second and third paragraphs supports the above interpretation. Consider the first sentence of the second paragraph. "The interests or equities of creditors (liabilities) are claims against the entity arising from past activities or events which, in the usual case, require for their satisfaction the expenditure of corporate resources." If cumulative preferred stock was meant to be excluded from creditors' equities in this sentence, the burden of exclusion must rest on a narrow definition of "claim"; certainly such an interest arises from past activities or events and requires the expenditure of corporate resources. But there is additional evidence that the Committee intended to include some preferred stocks as creditor interests. "The interests or equities of stockholders represent residual claims to corporate assets, although particular classes of stock may, by contractual arrangement, be assigned different priorities. For example, an issue may have priority in income distributions but not in liquidating distributions." These sentences indicate (1) that the committee uses the term "claim" in a broad enough sense to include the interests of preferred stockholders, (2) that the fully preferred type of stock mentioned at the beginning of this paragraph is not a stockholder equity, since it normally does not represent a residual claim; (3) that the Committee considers a partially preferred type of stock a borderline case of a stockholder equity since it is a semi-residual claim.

The third paragraph of Section V does not change the impression the reader obtains from the second paragraph. The Committee does not absolutely require that liabilities be subject to discharge at a determinable date. If "equities should be reported in financial statements in a manner which emphasizes their dominant characteristics," surely some issues of preferred stock should be reported as either liabilities or in a special category. This conclusion would be especially applicable to those issues of preferred shares which specify a retirement schedule. The vagueness of the Committee's position on this issue must be due to its reluctance to commit itself to a definite line with some types of preferred stock on one side and some types on the other. If so, the Committee must be highly commended for

[3] W. A. Paton, "Comments on Item 5 under 'Expense'," THE ACCOUNTING REVIEW, January, 1949, 49–53.

suggesting that a classification of equities on a nominal basis is not as desirable as distinguishing between *residual equities* and *specific equities.*

CRITICISMS

Failure to Consider Needs of Readers

The Committee has not made a clear statement identifying the readers of the corporate financial statements they discuss. Accordingly, the needs of the readers have not been clarified. While it would be possible for the Committee to recognize both the readers and their needs without mentioning them in the published report, and proceed to base their published remarks on those needs, the content of the report suggests that such is not the case. Furthermore, if such were the case, the Committee still should be criticized because it should inform its readers of the specific objectives of the financial statements under discussion if they are to appraise the Committee's proposals.

The most remarkable aspect of the Committee's failure to identify the users of corporate financial statements is that a number of references are made to one major group of users and to a specific sub-group, while no other group of users is mentioned at all. The Committee seemed to be subconsciously aware of the existence of one major group of users, but neither gave explicit attention to the needs of this group nor specifically excluded all other parties from consideration. The major group of users that was mentioned is investors; "stockholders" and "shareholders" were the terms used for a category of investors. Specific instances of references to investors or a group of investors are in paragraphs 1 and 3 of Section I, paragraph 3 of Section IV, and paragraphs 1, 2, 6, 11 and 14 of Section VI.

The author suggests that the Committee should have stated, near the beginning of the report, that it was concerned with financial statements presented to investors but that the members understand that those statements will be available to, and will be used by, other groups. Furthermore, the Committee should have followed up recognition of investors as the target of the statements under discussion with some assumptions about the problems. This introduction would provide a sound basis for a presentation of suggestions about the accumulation and communication of information regarding an enterprise—the primary function of accounting as stated at the beginning of the 1957 report.

Failure to Define Cost

Cost is generally considered an important concept in accounting. Indeed, it seems reasonable to say that cost is a concept *fundamental* to accounting. In the first paragraph of Section I, the Committee states that one of the purposes of their report is "to present the concepts fundamental to accounting." "Acquisition costs" and "expired costs" are considered fundamental enough to warrant special consideration; cost is not so viewed by the Committee.

One advantage that may result from giving special attention to the cost concept is elimination of the confusing dual use of the term (1) in the dynamic sense as an unfavorable value flow, i.e., the relinquishment of an asset or the creation of a liability, and (2) in the static sense as an asset, e.g., when non-monetary assets are thought of as costs carried forward to be charged against the operations of future periods. The amount of an asset may be *measured* by its cost, but surely a cost can not *be* an asset. The failure to distinguish between a measurement technique and the thing being measured has been one of the more widespread and unfortunate misunderstandings that has befallen the accounting profession. There are two relationships between costs and assets. (1)

Costs may *cause* the receipt of an asset, as when the relinquishment of money (the occurrence of cost) causes the receipt of merchandise. (2) Assets may be *measured on the basis of their cost*, meaning that the amount of an asset may be determined by determining the amount of the costs involved in obtaining it and assuming that the amount of the asset is equal to the sum of those costs. Cost is a substituted basis of measurement. The asset is not being measured at all. That is one reason why cost is the least relevant of the several objective measurement techniques that are available. Special attention to the cost concept could contribute to the elucidation of both the general problem of measurement in accounting and the nature of assets.

Another possible advantage of a definite presentation of the cost concept would be some clarification of the types of costs that may occur. Thus, expenses are costs that contribute, directly or indirectly, to certain types of favorable value flows; losses are costs that do not contribute to any favorable value flow. "Expired costs" could be eliminated from the terminology of accounting. In the 1957 statement, expired costs are defined as "those having no discernible benefit to future operations." This is a reference to "cost" in the static sense referred to in the above paragraph, but the only previous use of "cost" was in the dynamic sense of an unfavorable value flow (in connection with acquisition cost). The presentations of the concepts of expired costs, expense, and loss in the Committee's report do not even make it clear that those concepts are dynamic in nature —flows, not accumulations. Expenses and losses are occurrences. They may be the expiration of assets; to say that they are costs that have expired is to use cost in the static sense that is distinctly inconsistent with its more general use.

Poor Definition of Revenue

"Revenue, the principal source of realized net income, is the monetary expression of the aggregate of products or services transferred by an enterprise to its customers during a period of time. In accounting for revenue, the two central questions are the timimg of revenue recognition and the determination of amount."

Several comments may be made about this paragraph.

1. The term "monetary expression" does not contribute anything to the communication of an idea from writer to reader unless it be the reduction of the possibility that the reader may think that the Committee thinks that revenue *is* the aggregate of products or services transferred by an enterprise to its customers during a period of time. It seems strange that this term should be used in defining revenue but not in defining asset and other things that are expressed in terms of money on financial statements. If by monetary expression the Committee means the receipt of monetary assets or the elimination of liabilities in exchange for the aggregate of products or services transferred, the phrase is an inappropriate and misleading abridgement.
2. The definition more nearly implies an outflow than an inflow, although the use of the term aggregate and the avoidance of a direct statement of the dynamic nature of revenue more nearly suggests that revenue is an accumulation of what has flowed out. Why does the Committee avoid a clear statement to the effect that revenue is an increment in a monetary asset or a decrement in a liability under certain specified conditions? If the "realized net income of an enterprise . . . is the change in its net assets arising out of" certain event, and if revenue is "the principal source of realized net income," the Committee's reluctance to say that *revenues are favorable changes* in net monetary assets in certain specified events and that *expenses are unfavorable changes in net assets* in described circumstances is difficult to understand.
3. "The timing of revenue recognition" would not be a separate conceptual problem if

revenue were clearly defined as a favorable value flow. The time of the asset increment or liability decrement would be the time of revenue recognition.

4. "The determination of amount" of revenue would not be a separate measurement problem if revenue were defined in terms of assets and liabilities, because the amount determined for recording the asset or liability would be the amount of the revenue.

Failure to Define Gain

The omission of a definition of gain is noticed primarily because of the crucial role of the term in defining realized net income. When one considers that clause (a) of the income definition is likely to receive the unanimous support of the statement's readers, the precise meaning of "other gains or losses to the enterprise from sales, exchanges, or other conversions of assets" is important in conveying the Committee's thoughts. Loss was defined. Why was gain slighted?

The reader's curiosity about gains may be given an additional fillip by the ways in which the Committee uses the term. Its use in clause (b) of the income definition suggests that the excess of revenue over related expired costs is a gain. We also note that a firm can have gains from price changes related to inventories and from the liquidation of a liability. A clear distinction between gains and revenues would have improved the statement, especially if the definitions had emphasized the recurring aspect of revenues and the nonrecurring aspect of gains.

Confusion Regarding Measurement of Nonmonetary Assets

The statement contains several comments regarding the role of acquisition cost in the measurement of non-monetary assets, modifications of acquisition cost, and realization. They may be discussed in the order in which they appear.

Item 1, last paragraph, Section II: "The essential meaning of realization is that a change in an asset or liability has become sufficiently definite and objective to warrant recognition in the accounts. This recognition may rest on an exchange transaction between independent parties, or on established trade practices, or on the terms of a contract performance of which is considered to be virtually certain. It may depend on the stability of a banking system, the enforceability of commercial agreements, or the ability of a highly organized market to facilitate the conversion of an asset into another form."

Item 2, fifth paragraph, Section III: "Any increase or decrease in the aggregate amount of assets should be corroborated by a market transaction or its equivalent. For example, discovery, gift or donation, the processes of accrual or accretion, and (under certain contractual arrangements) production, may entail recognition of new assets. In all cases the requirements of objective measurement should be met; the concept of realization provides general standards for the recognition of asset increases."

These two paragraphs appear to deal with similar subject matter; the realization paragraph refers to a change in an asset or liability, while the second quotation refers to a change in the aggregate amount of assets, i.e., a change in an asset that is not exactly offset by an opposite change in another asset. While the distinction, if any was intended, between recognition resting on something (second sentence of realization paragraph) and recognition depending on something (third sentence) is not at all clear, the Committee should not be surprised if the reader obtains the impression from the last clause of the realization paragraph that the production of goods which have a ready market may be considered an event which changes an asset. When the reader reaches the fifth paragraph of Section III, he may begin to doubt whether or not the Committee thought it possible that production could be realization. The first sentence refers to corroboration by a market transaction or its equivalent but does not say whether or

not the firm must participate in the market transaction. The second sentence gives examples of equivalents of market transactions; it appears to disclaim production unless it is according to contract. The third sentence passes the buck to realization, but only for asset increases; the definition of realization referred to asset changes.

> Item 3, third paragraph under *Measurement*, Section III: "Non-monetary assets . . . are typically stated at acquisition cost or some derivative thereof."
>
> Item 4, following paragraph: "Assets that are acquired without a stated money consideration, or through transactions which do not result in an objective price, are measured by either the market price of the consideration given for the new asset or the exchange price of the new asset as established in the market . . . [or by] . . . appraisal by independent parties."
>
> Item 5, second following paragraph: "Modification of acquisition cost may be occasioned by recognition of such factors as depreciation, depletion, or obsolescence."
>
> Item 6, following paragraph: "The aim of all measurements of assets is to state the amount of available service potential in the most objective and realistic terms. Amounts so stated should be carried forward unchanged, except for modifications as described. . . ."

Items 3 and 4 state the committee's position with regard to the measurement of non-monetary assets at the acquisition date. Item 5 presumably means "modification of acquisition cost or other initially assigned amount." It is item 6 that causes the most confusion. The establishment of objectivity and realism as goals of asset measurement is unsatisfactory. One objection is that the order of the two goals suggests that objectivity may be considered the primary goal of asset measurement, a curious confusion of means and ends. Secondly, to ask for measurement in realistic terms seems to say "we favor virtue, but we do not know precisely what is virtuous." The statement would be improved if accuracy were substituted for realism as a goal and if objectivity were mentioned in a way that would make it clear that it was an intermediate goal, a means of contributing to accuracy. If the informational needs of investors were carefully analyzed at the beginning of the statement, some criteria of accurate measurement of assets could be established; criteria of realistic measurement would be more difficult to select.

Additional confusion is contributed by the statement "Amounts so stated should be carried forward unchanged, except for modifications as described . . . " This apparently means that once a satisfactory measurement has been achieved, we can forget about future presentations of assets in the most objective and realistic terms, except in the specified cases. Having done a good job once, we can rest on our laurels. The unsatisfactory implications of this could be reduced in significance if a clear-cut and complete list of occasions for modification was presented. Unfortunately what modifications are described is anyone's guess. No paragraph or section is referred to. The only specific conclusion the reader can reach is that the modifications in question are the ones mentioned in the preceding paragraph—those "occasioned by recognition of such factors as depreciation, depletion, or obsolescence." What the other "factors" are we do not know. Since this paragraph refers to assets in general, are such factors as accrual of interest, changes in market values of securities owned, overstocking of merchandise, the closing of a bank, or the gradual expiration of an insurance policy to be recognized as justifying modification of asset amounts? When the reader reaches the next paragraph of the statement, he encounters what appear to be additional descriptions of modifications:

> Item 7: "When the service potential of a given asset is no longer available to the enterprise, whether transferred by sale, exhausted through use, or dissipated by obsolescence or damage, the acquisition cost of the asset, as modified by events

subsequent to acquisition, should be eliminated from the accounts and any final gain or loss on disposition recognized."

That is the end of the section on assets, but the next section includes the following sentences:

Item 8, second paragraph under *Expired Costs:* "Recognition of cost expiration is based either on a complete or partial decline in the usefulness of assets, or on the appearance of a liability without a corresponding increase in assets. The service potential of assets may decline because of transfer of title, gradual or abrupt physical deterioration, consumption of service potential through use even though no physical change is apparent, or economic deterioration because of obsolescence or change in consumer demand."

The last phrase of this quotation seems to suggest that inventories may properly be written down to replacement cost or net realizable value, at least under certain circumstances. Is this another description of a "modification"? If so, is it not important enough to be mentioned in the discussion of asset measurement?

Finally:

Item 9, fourth paragraph in Sectipn VI: "In some cases there may be a clear indication of a change in an asset or liability although the criteria for realization established in the trade or industry have not yet been met. Such changes not yet realized should be disclosed in financial reports but should not be permitted to affect the amount of realized net income."

There are several ways that the change not yet realized could be disclosed in financial reports without being permitted to affect realized net income. (1) It could be disclosed by a footnote or parenthetical notation related to the asset or liability item affected. (2) It could be discussed in a footnote to the retained earnings section. (3) It could be listed in the income statement but the amount not added or subtracted in the computation of the amount of realized net income. (4) The asset or liability affected could be changed with the offsetting entry being made directly in a special net worth account.

If there is a "clear indication of a change in an asset or liability," the fourth method of disclosure discussed above would seem to be the most honest, the least likely to mislead the reader. This method, however, does not appear to be acceptable to the Committee. The realization paragraph in Section II clearly indicates that for realization to occur there must be a change in an asset or a liability. It also implies that any change in an asset or a liability that is sufficiently definite and objective to warrant recognition in the accounts is an instance of realization. If all changes are realizations, the fourth method of disclosing the *unrealized* change is not acceptable. This reference to disclosure of a clearly indicated change in an asset or liability which is not sufficiently definite and objective to warrant recognition in the accounts is not of much help to the reader.

The confusion seems to be due to the great respect the Committee has for "established trade practices." The realization paragraph permits realization on the basis of established trade practices; the fourth paragraph of Section VI seems to say that any clear indication of a change should not be used as a basis for changing the asset or liability item unless such a change would conform to established trade practices. This may be an effective means of achieving uniformity of accounting practices, but it can hardly be expected to result in any general improvement in the accuracy of the measurements of assets, equities, or income. The Committee's disorganized discussion of the important subject of asset measurement is unsatisfactory.

Current Operating Performance or All-Inclusive Concept of Income

"The realized net income of an enterprise measures its effectiveness as an operating unit and is the change in its net assets arising out of (a) the excess or deficiency of revenue compared with related expired cost and (b) other gains or losses to

the enterprise from sales, exchanges, or other conversions of assets. Interest charges, income taxes, and true profit-sharing distributions are not determinants of *enterprise* net income."

"In determining *net income to shareholders*, however, interest charges, income taxes, profit-sharing distributions, and credits or charges arising from such events as forgiveness of indebtedness and contributions are properly included."

Clause (b) of the first sentence is the major evidence that the Committee offers in the income determination section of the statement on the question at hand. "Other gains or losses to the enterprise from sales, exchanges, or other conversions of assets" includes several items that are sometimes given as examples of charges or credits that would be included in the determination of income on the all-inclusive basis but excluded on the current operating performance basis. Apparently, the Committee would include charges or credits from sales of long-term assets, unusual write-offs of intangibles, exchange of securities owned for other securities by exercising a conversion privilege, calamity losses, and the write-off of unamortized bond issue cost when bonds are called prematurely. The Committee reinforces the reader's interpretation of "other gains and losses" with the final paragraph of Section III, in which reference is made to recognition of gain or loss on the disposition of an asset. Also, the difference between the call price and the net book value of bonds called is a gain or loss according to paragraph 5 of Section V, and it is a disposition of an asset (cash). However, whether or not the Committee meant to include several of these types of charges or credits depends upon what they meant by "conversions of assets." If they meant to include all dispositions of assets, all of these items are included, but if they only meant conversions of assets to other forms of assets, only sales of long-term assets and calamities which are partially or excessively covered by insurance would be included.

Net income to shareholders may include more gains and losses than enterprise net income. It is difficult to guess the general character of the "credits or charges arising from such events as forgiveness of indebtedness and contributions." Does this mean indebtedness to the firm or from the firm, contributions by the firm or to the firm, or both? Does "such events as" these mean charitable acts? The safest conclusion is that the Committee's concept of net income to shareholders was meant to be more nearly an all-inclusive concept than was enterprise net income. The description of net income to shareholders supports the related conclusion that the Committee intended that item to include some non-recurring, non-operating charges and credits in addition to those included in enterprise net income.

The quotations regarding the breadth of the income concept(s) that have been discussed in the preceding paragraphs provide ample evidence that the committee members either did not reach agreement regarding how firmly they wanted to embrace the all-inclusive concept of income, or agreed that the question should not be definitely answered in the report. But when the reader reaches the third paragraph of Section VI, he becomes more confused than ever.

"The reports for the period will encompass not only those transactions which arise from operations of the period, but also some transactions completed during the period and related to activities of prior periods. Transactions relating to current operations should be reported as components of realized net income of the period. Income-determining transactions recognized in the current period but primarily relating to prior activities should not affect the determination or reporting of realized net income of the period."

Has the all-inclusive idea been thrown out the window? Certainly, charges or credits from sales of long-term assets and from conversions of securities to other forms of securities are primarily related to prior activities. The "gain or loss" on the

disposition of a fixed asset surely is more closely related to the depreciation rate applied over its life or to changes in prices in prior periods than to the management's shrewd bargaining ability in the disposition of the asset. Gains or losses on security conversions are more closely related to the holding period of the old security during which the market prices of the securities changed than to the period of the conversion. Yet, these gains and losses were clearly included in the determination of realized net income in Section IV.

Before condemning the Committee for what appears to be a basic inconsistency in its report, the reader should observe that a literal interpretation of the last sentence of the above-quoted paragraph may eliminate the clear-cut inconsistency and replace it with vagueness. The Committee said "income-determining transactions" primarily relating to prior activities, not gains or losses. The gain or loss on sale of a fixed asset is primarily related to prior periods. The transaction (sale) is very definitely related to the current period. Perhaps the Committee was thinking of events such as adjustments of prior periods' income taxes or bad debt provisions. Nevertheless, a cursory, rather than careful, examination of the statement will be required to give the reader a clear impression of the Committee's views with regard to the relationship between extraordinary types of changes in net assets and realized net income.

MIXED FEELINGS

The Realization Concept

The Committee's presentation of the realization concept is encouraging because it may reduce the use of the term in narrow, cash-oriented senses. The widespread use of the old concept was unfortunate in that it discouraged any recognition in the accounts of favorable changes in assets unless that change was "realized" in the form of cash or an asset that could readily be converted to cash—what we now think of as short-term monetary assets—or the elimination of a liability. Decreases in assets were recognized whether "realized" or not. This distasteful association of the realization concept is left behind when the broader meaning is adopted. We are now free to use the concept of an increment in a net short-term monetary item or an increment in a net monetary item as we see fit, and we can say precisely what we mean. Rather than refer to "unrealized income," we can say "income not involving a funds receipt" (if funds are defined as net short-term monetary items). Even if this expression degenerates into "non-funds income," we will be better off than with the old, vague concept of realization.

The new realization concept is, of course, essentially useless—a point in its favor. The definition of realization suggests that we can stop using the term and speak of changes in assets and liabilities without using jargon. But the remainder of the report is disappointing in several places. The discussion of changes in the aggregate amount of assets in the fifth paragraph of the asset section is a case in point. The requirement of a market transaction or its equivalent to corroborate a change in the aggregate amount of assets seems to be inconsistent with the description of evidence of change in an asset or a liability in the realization paragraph. Furthermore, the statement in the asset paragraph, "the concept of realization provides general standards for the recognition of asset *increases*" is peculiar in view of (1) the paragraph's topic is "any *increase or decrease* in the aggregate amount of assets," and (2) the two-way definition of realization.

The second disturbing recurrence of the realization concept is in the second paragraph of the income determination section. What does the word "realized" add to the definition of net income of an enterprise?

The fourth paragraph of the disclosure section of the report exemplifies another unnecessary use of the term "realization." Perhaps that paragraph could have been stated as follows:

"In some cases there may be a clear indication of a change in an asset or liability although the industry's established criteria for recognizing changes in assets and liabilities in the accounts have not yet been met. In such cases of difference of opinion between the accountant and the industry, the industry opinion should dominate the determination of net income, but the disagreement should be fully disclosed."

Two Net Income Concepts

Many readers probably reacted unfavorably upon first reading of the income determination section. To some, it must have been "obvious" that the members of the Committee could not reach agreement on either the proprietary or the entity concept of income, so compromised by presenting both. Those readers who have a distinct preference for one or the other of the concepts must have been disappointed. Upon further analysis, however, the dual concept of income is seen to be not especially strange; it is related to the long popular distinction between net operating profit and net income. Presenting two concepts of income on the same income statement is not likely to reduce the amount of information gleaned from it by the reader; indeed, it may be thought of as better disclosure of the information accumulated in the accounts. After all, accountants have seldom seen fit to match interest costs with revenue anyway, and the Committee makes clear its lack of desire to match income taxes with income before tax. What is there to lose by deducting these items and one or two others from one type of net return figure to obtain another?

As an incidental point, we may observe that the Committee's failure to define cost permits it to use only one definition of expense in two concepts of income. In the general definition of net income, the Committee provides for two kinds of deductions: (1) expired costs (in this case, expenses) related to revenue and (2) losses. Interest and income taxes apparently do not fit into either of these categories when computing enterprise net income but do fit one of them (presumably the first) when net income to shareholders is in question. Whether or not interest and income taxes are expired costs clearly depends upon the definition of cost. The Committee has left that concept undefined, a position which it seems to feel permits it to use the term differently in consecutive paragraphs. In the second paragraph of Section IV, costs and expired costs do not include interest, income taxes, and true profit-sharing distributions; in the third paragraph, those three items are deductible as expired costs.

Presumably the Committee's answer is that what is includible in costs depends upon whose costs are in question. To say that interest is a cost to the shareholders but not to the enterprise is no more inconsistent than to say that the acquisition of a competitor's plant is a cost to the firm but not to the industry. Since the Committee is not limiting itself to one point of view, it cannot limit itself to one definition of cost (or revenue? or asset?). If this attitude is carried very far, we soon encounter serious limitations to the usefulness of the dual approach to income.

Purpose of the Statement

It may seem presumptuous for a reader of the Committee's report to question its purpose, but as a member of the American Accounting Association the author feels that he has the right, if not the duty, to present his own view of what the Committee on Concepts and Standards should attempt to accomplish in a statement of the type in question. The Committee stated its objectives clearly. "The pur-

poses of this Statement are to present the concepts fundamental to accounting, and to suggest standards to which general-purpose reports . . . should conform, and by which existing accounting practice may be judged." Should the Committee be attempting to set the standards for appraising current practices? Or should the Committee be more interested in establishing goals towards which accounting practice should move and which can be used as ideal standards for appraising alternative practices regardless of whether or not any of the alternatives approach the ideal?

Some readers may feel that the American Institute of Certified Public Accountants is the logical organization to sponsor statements of standards for current practice, and that the American Accounting Association should be more concerned with the future. A division of functions along this line is not necessary, and is not likely to be desirable. If practicing accountants do not give any attention to improving the standards for their profession over a period of years, improvement is not very likely to occur. And if accounting teachers do not concern themselves with the currently accepted standards of professional practice, their teaching and their opinions about what accountants should be doing will not be well-grounded. Furthermore, alternative "authoritative, statements" about both standards of current practice and goals for the accounting profession are desirable. No one organization should be considered "the authority" in either area.

In the author's view, the Committee on Concepts and Standards should take one of the following courses: (1) It should concentrate on (but the Association as a whole need not concentrate on) a statement of ideal standards for use as beacons for everyone interested in the development of accounting practice. (2) It should issue two major statements, one a statement of standards for current accounting practice, the other a statement of ideal standards. If the difficulty of achieving any reasonable degree of accord on ideal standards is overwhelming, the Committee and the Association should encourage individual efforts to develop coordinated statements of ideals in order that all accountants may be made more conscious of the general fact that possibilities for improvements in accounting practices exist.

The 1957 statement shows evidence of the Committee's interest in ideal standards. As compared with the 1948 statement, several instances of references to goals are noted, and the Committee is careful not to confuse them with standards for current practice. For example, the first paragraph on the measurement of assets refers to an *abstract* concept of value. The discussion of cost of goods sold refers to three *ideal* objectives of the measurement of that item. The disclosure section includes comments regarding analyses of cost-volume-profit relationships, funds statements, and supplementary data for evaluating the significance of price fluctuations, but the "Committee does not urge the employment of any particular financial statements in any specific forms." While the Committee was careful to avoid presenting these ideas as current standards, it is entirely possible that some of the confusion regarding the measurement of assets, as noted in a previous section of this paper, was due to an attempt to present both types of standards in one statement. A clear separation of the two types of standards in two statements, or concentration upon ideal standards, would avoid this source of confusion.

SUMMARY

The three major sections that form the body of this paper have been summarized in the introduction. At this point, perhaps the author should again express apprecia-

tion to the Committee for having formulated a statement that is a substantial improvement over its predecessor. The greater length of the critical comments should not be considered to outweigh the commendations; criticisms are bound to be more difficult to express than approvals.

There remain a few aspects of the Committee's report on which the author would like to comment were it not for the already excessive length of this paper. Instead, he will only direct the reader's attention to them.

1. The assumption that investor-readers will be willing and competent to read financial statements carefully and with discrimination, while not patently different from the related statement in the 1948 edition, seems to set the tone for a greater emphasis upon disclosure of more information rather than simpler information. This is a desirable recognition of the important role of professional analysts in investment decisions, for which the committee that wrote Supplementary Statement No. 8 should be thanked.
2. The reference, under *Means of Disclosure*, to supporting statements and supplementary exhibits and to four specific types of supporting statements together with the Committee's decision not to urge the employment of any particular financial statements in specific forms should encourage experimentation with new types of statements and doing something about the serious deficiencies in traditional statements.
3. The Committee's discussion of comparability in the final paragraph is more appropriate than the traditional worship of consistency.
4. While the Committee's reference to funds statements is an improvement over the previous edition that is appreciated, perhaps more attention should have been given to this underused statement. A definition of funds may have been desirable to encourage the use of funds statements.
5. The discussion of the use of supplementary data to aid the reader in evaluating the significance of price fluctuations is an improvement over the 1948 attitude for which the Committee that formulated Supplementary Statement No. 2 is responsible.
6. The Committee's opposition to accrual-deferral accounting for the income tax related to the difference between reported income and taxable income is undesirable. Perhaps the Committee should have considered the possibility that one-value-determining aspect of an asset is its adjusted basis for tax purposes. This may have led to acceptance, if not support, of the American Institute's alternative position.[3]
7. Omission of the term "reserve" from the terminology relating to financial statements is in accord with the commendable conclusions of the committee that prepared Supplementary Statement No. 1.
8. The addition of two paragraphs on consolidated statements is another improvement that originated in a supplementary statement.

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[3] See Accounting Research Bulletin No. 43, *Restatement and Revision of Accounting Research Bulletins* (New York: American Institute of Accountants, 1953), p. 79.

ASSOCIATE MEMBERSHIPS

For the information of teaching members of the American Accounting Association, the numbers of new Associate Memberships are reported by schools. These include all applications processed by our Secretary's Office during the period of August 25, 1957 through October 15, 1957.

Over 40 Members

New York University
University of South Dakota

20–25 members

Michigan State University
San Jose State College

10–20 members

Bryant College
Fairleigh Dickinson College
Harpur College
LaSalle Extension University
North Texas State College
Ohio State University
University of Illinois
University of Michigan
University of North Dakota
University of San Francisco
University of Southern California
University of Texas
University of Utah
University of Washington

5–10 members

Bentley School of Finance
Brooklyn College
Macalester College
Northwestern University
Pennsylvania State University
University of Alabama
University of California—Los Angeles
University of Denver
University of Detroit
University of North Carolina
University of Pennsylvania
University of Puerto Rico
University of Tulsa
Wake Forest College
Wayne University
Xavier University

Less than 5 members

Abilene Christian College
Anderson College
Ashland College
Assumption University
Baylor University
Boston University
Bowling Green State University
Bradley University
Brigham Young University
Butler University
Carnegie Institute of Technology
Centenary College
Cleary College
College of Steubenville
Colorado College
Columbia University
Delta State College
De Paul University
Drake University
Drexell Institute of Technology
Duquesne University
Eastern Nazarene College
Fenn College
Florida State University
George Washington University
Golden Gate College
Goldey Beacom College
Grambling College
Greenville College
Harding College
Harvard University
Henry Ford Community College
Hofstra College
Indiana State Teachers College
Indiana University
Iona College
Jacksonville State
Kansas State Teachers College
Kent State University
LaSalle College
Lehigh University
Los Angeles City College
Los Angeles State College
Louisiana State College
Louisiana Tech
Loyola University
McGill University
McNeese State College
Miami University
Moravian College
Morton Junior College
Northeastern University
North Park College
Ohio University
Oklahoma A & M
Oklahoma State University
Oregon State College
Pace College
Portland State College
Queens University
Regis College
Reid CPA Coaching School
Rockhurst College
Roosevelt College
Russell Sage
Rutgers University
Sacramento State College
St. Louis University
St. Mary's University
San Diego State College
San Francisco State College
Santa Ana Jr. College
Siena College
Southern Methodist University
Southern State College
Southwest Missouri State College
Stanford University
Tennessee Polytechnic Institute
Texas Technological
University of Arkansas
University of Buffalo
University of California
University of Chicago
University of Cincinnati
University of Connecticut
University of Dayton
University of Kansas
University of Kansas City
University of Kentucky
University of Miami
University of Minnesota
University of Mississippi
University of Missouri
University of Nebraska
University of New Mexico
University of Oklahoma
University of Omaha
University of Pittsburgh
University of Rochester
University of Wisconsin
Walton School of Commerce
Washington State College
Washington University
Washington & Lee University
West Texas State College
Wichita University

PRICE-LEVEL DEPRECIATION AND REPLACEMENT COST

WENDELL P. TRUMBULL
Professor, Lehigh University

IT HAS BEEN CONSIDERED an imperfection of price-level depreciation that it does not provide, at least systematically, total deductions from revenue in an amount equal to the cost of replacing the specific assets in question. For example, total price-level depreciation on an asset costing $10,000, without value at retirement date and written off over years during which the price level is doubling in a straight-line manner, will amount to roughly $15,000. Here, it is pointed out, is a deficiency of $5,000 from the cost of maintaining (replacing) the original investment at the new price level. Or, if the price level declines 50% during this asset's useful life, the total price-level depreciation will be about $7,500—an amount materially in excess of the $5,000 replacement cost.

Based upon the discussion and simple illustrations that follow, the writer believes that these differences between price-level depreciation and replacement cost are irrelevant and that, further, there is no basic inequality between the two. This disparity is based on only two price-level readings—one at acquisition date and the other at retirement date. Doesn't such analysis imply that the course of prices during the ten- or twenty-year life of a depreciable asset is unimportant, even though it is during these years that the service life of the asset is expiring and the revenue is being received out of which the initial investment is recovered in full or in part? Is it consistent to apply the price-level adjustment to the total initial cost for the entire life of the asset and at the same time recognize that the asset is depreciating in amount year after year? The whole problem deserves further analysis; but first it may be noted how the United States Steel Corporation estimated the deficiency in reported depreciation at $904 million since 1940. The annual report for 1956 reads:

> Recorded wear and exhaustion (exclusive of accelerated depreciation and including only regular depreciation on amortizable facilities) for a given year was subdivided by the prior years in which the investments being depreciated were acquired. Each subdivision was then adjusted by the change in buying power of the dollar experienced from the year of acquisition to the given year, as indicated by the *Engineering News-Record* index of construction cost. Summation of the adjusted items then gave the wear and exhaustion needed to recover the proper proportion of buying power originally expended. This same process was repeated for each year, thus providing the data of wear and exhaustion needed. . . . In interpreting the wear and exhaustion deficiencies that have been calculated, it should be remembered that each year's deficiency is in dollars of the buying power that prevailed in that year—not in today's dollars of diminished buying power. The $904 million aggregate deficiency for the 17-year period would be considerably greater if the deficiencies were converted into today's dollars.

This is a brief description of the proper method of adjusting for price changes in terms of a given price index. As will be demonstrated, this method also provides the theoretically correct amount of total depreciation on a replacement-cost basis.

Definitions and Objectives

That there is no income (net) until capital has been maintained out of the revenue yielded by the same capital is a fundamental consideration. ***Depreciation*** is the decline in plant capital during a given interval resulting from the expiration of service content or remaining useful life. It is

one of the expenses deducted from revenue, directly or indirectly, for the purpose of determining the income or loss for a given period—a process that distills into one figure the amount by which the capital of a business (usually from the owners' point of view) has grown or shrunk as the result of operations.[1]

If prices of plant and other productive agents have not changed noticeably since their acquisition dates, the measurement of depreciation and other expenses is conveniently based on the dollar expenditures originally made. If, however, it is decided that price changes of assets have been substantial enough since the date of acquisition to require adjustment of the portion expired, expenses are most fairly measured in terms of the current cost of replacing the capital that has been used up. Thus, replacement cost may be viewed broadly as a basic concept applicable to situations in which operating costs and expenses should be corrected for price-level changes. Wherever the prices of acquiring business assets have not changed, it may be noted that original cost and replacement cost yield the same amount of periodic expense.

The revenue deductions for a year, from the replacement-cost point of view, are the current revenue dollars "earmarked" as replacements for the capital used up in operations. Or, in more familiar terms, expenses reflect outflows of capital for which an equivalent amount of revenue must be considered a return *of* capital; the remainder of the revenue, if any, reflects a return *on* capital. If the amount of revenue for a period that is earmarked as expense is either more or less than the sum needed to replace the expired capital, the remainder will not, of course, be a fair measurement of income for the period. For this reason it is said that both the revenue and the revenue deductions on an income statement should be expressed in homogeneous dollars. Accordingly, the *price-level depreciation* for a given year is the current cost of replacing the plant service capacity used up in operations during that year.

Maintenance of Capital and Replacement Cost

Three leading conceptions of plant capital have been distinguished by accounting authorities.[2] Plant capital may be expressed in dollars, net of depreciation to date, on one of the following bases: (1) initial dollars invested; (2) initial amount of purchasing power committed; (3) productive capacity of specific plant assets. It is a necessity of accounting that any concept of capital employed be susceptible of reasonable approximation and consistent application from year to year.[3]

As already suggested, the idea of *replacement cost* can be applied in the broadest sense to mean the cost of replacing expired plant capacity in terms of each of these three conceptions of plant capital. The term, of course, is usually restricted in accounting literature to specific assets and the third of the above-listed ways of viewing plant capital; however, what is important in income determination is not the maintenance of specific assets, but the maintenance of the over-all capital of the

[1] *Operations* is here used in a broad sense to include gains and losses arising from the mere existence of business investment. *Capital* may refer to either the assets of a business or the equities in the same assets. The term is here used mainly with reference to the investment in plant (net of depreciation) or other assets at a given date. The term *capital* seems useful in emphasizing the financial nature of assets for accounting purposes.

[2] William A. Paton and William A. Paton, Jr., *Asset Accounting* (New York: The Macmillan Company, 1952), pp. 321–326.

[3] Hardly applicable for periodic accounting determinations is the definition of capital as the present value of estimated future net revenues, with present value expressed in a constant unit of value and determined by use of an unvarying discount rate. That is, capital is maintained only if the income potential or the future net services are maintained. From this standpoint it is necessary to exclude from income any adjustment of capital that reflects changes in either the interest rate or the value of the dollar.

firm. Good income determinations depend upon selection of the fairest basis of capital estimation. Depreciation as reported today in financial statements is based on the cost of replacing, or maintaining, dollar capital; but if corrected for price changes, the same depreciation would be calculated on the basis of replacing either (1) the purchasing power or (2) the service capacity of the specific assets used up during each year.[4] The Lifo method, for example, has its justification for tax and accounting purposes in the fact that it yields a deduction for "cost of goods sold" that approximates the cost of replacing the product sold. It is clear, in an economic sense, that there is no difference between the amount of capital used up in a particular situation and the amount that it would take to replace what has been used up.

Replacement cost should mean the cost of replacing expired assets (including services expiring at the moment they are acquired) in the most profitable form of business investment available to the firm in question. In general, accountants follow the practical rule that expenditures actually made are the appropriate ones. But of greater significance is the point that the replacement-cost basis, broadly conceived, does not connote actual replacement of expired plant capital, either as to individual units or as to total plant investment. In many instances total capital is maintained with much of the reinvestment taking place in other kinds of assets; in others plant capital is expanded without an accompanying addition to a firm's total assets.

Maintaining capital means, fundamentally, maintaining the income potential of a business. Successful management is continually modifying the composition of the capital in a company in attempting to maintain and increase the income potential in the face of changing tax situations, wages, product demand, technology, interest rates, and so on. Higher income taxes, to illustrate, call for more current capital and put a premium on such deductible expenditures as advertising, research and development, and employee training; soaring plant costs tend to increase the budget for repairs and maintenance and to extend the life of existing plant items; general wage raises may induce further investment in labor-saving equipment. Ultimately, the concept of replacement cost is just as broad and deep as the problem of measuring the extent to which a company's income capacity has been altered during a year's time, including an estimate of the change in prospective value of the company's personnel to it during the year.

That a more limited, workable conception of replacement cost must be adopted is obvious. At the same time it is an oversimplification to think of plant assets only in terms of 40-year buildings, 10-year machines, etc.—a conception underlying the early view that depreciation took place in lump-sum amounts only when depreciable assets stopped operating and were finally retired. For depreciation calculations a plant asset is primarily so many units or annual segments of service benefits. Depreciation cost refers to the expiring service benefits. If it is estimated, for example, that one-fifth of the service life of a machine has been used up in the current year, the price-level depreciation cost is the number of current revenue dollars that it would take (or does take)

[4] Whether adjusted price-level depreciation should be based upon the cost of replacing expired purchasing power or upon expired service content of specific assets is not considered. Price levels mentioned may be assumed to pertain, as desired, to specific asset costs, specific price indices, or to a general price index.

To date, distinct preference has been expressed for the purchasing-power concept with respect to plant capital. Technological progress and the constant substitution as between plant and other forms of assets tend to make the purchasing-power concept the most generally useful one. On the other hand, price changes of specific inventory items are largely eliminated by Lifo and similar cost-of-goods-solds methods in the only widespread application of price-level accounting now in effect in the United States.

to replace either one-fifth of the original purchasing power invested or one-fifth of the original productive services acquired, depending upon the concept of capital used. What it would eventually cost to replace specific plant assets and whether they will be replaced are irrelevant to the depreciation problem, even for depreciation on a replacement-cost basis. What is relevant, to repeat, is the current cost of getting new productive agents in the firm to take the place of the service benefits that have currently expired.

Adequacy of Price-Level Depreciation Demonstrated

Depreciation cost, adjusted each year to the prevailing price level, is next analyzed in a series of illustrative cases. A primary objective is to test the adequacy of price-level depreciation in terms of its ability to maintain capital during years of sustained and fluctuating price changes. Viewing depreciation as the cost of replacing the expirations of plant, we can test the calculated amounts by determining whether a firm's capital, all assumed to be invested in plant assets, would be maintained as long as new plant assets are acquired each year in an amount equal to the depreciation recognized. The illustrations demonstrate that annual price-level adjustments do provide total depreciation or other costs of operation sufficient to allow for the replacement of expired capital in the long run under a variety of price-level conditions. A firm's failure to maintain capital, of course, eliminates a portion of the basis to which the price-level adjustment would otherwise apply.

The same facts are assumed throughout the illustrations wherever possible. A sum of $5,000 is committed to a business venture at a time when the price level is 100. This amount is invested in a 5-year depreciable plant asset having no residual value. It is assumed, for the sake of simplicity, that the revenue benefits are received as expected in five lump-sum amounts, one at the end of each year, in such amounts as to make straight-line depreciation appropriate. At the beginning of each succeeding year a reinvestment is made in plant assets in an amount equal to the depreciation just recognized at the end of the preceding year. These reinvestments are made in assets having successively shorter lives, so that all assets are finally retired at the end of the fifth year. Net income, to the extent that it exists, is distributed to the owners at the end of each year. In this way the firm's entire capital is kept in plant assets; and plant depreciation is the only expense. The behavior of the price level is stated with each illustration; any modifications of the above basic conditions are also indicated in connection with specific illustrations.

In Illustration I the price level rises steadily to 200 during the five-year period.

Illustration I

	Adjusted depreciation by years				
Year-end index:	*120*	*140*	*160*	*180*	*200*
	Yr. #1	*Yr. #2*	*Yr. #3*	*Yr. #4*	*Yr. #5*
Plant investments:					
1/1/1 $5,000 5-year asset	$1,200	$1,400	$1,600	$1,800	$ 2,000
1/1/2 $1,200 4-year asset	$1,200	350	400	450	500
1/1/3 $1,750 3-year asset		$1,750	667	750	833
1/1/4 $2,667 2-year asset			$2,667	1,500	1,667
1/1/5 $4,500 1-year asset				$4,500	5,000
Depreciation for fifth year—equal to initial investment					$10,000

Depreciation for the first year of $1,200 is the straight-line amount of $1,000 on the initial $5,000 investment multiplied by 120/100, the price-level conversion factor. This $1,200 charge is the basis of the investment in a four-year asset at the beginning of the second year. Depreciation for the second year is $1,000 on the first asset multiplied by 140/100, or $1,400, plus $300 on the second asset multiplied by $140/120, or $350. On this basis the investment at the beginning of the third year is obtained, and so on.

Under these conditions, total depreciation on the initial investment of $5,000 amounts to $8,000. Replacement cost on this asset is, of course, $10,000. However, as the illustration shows, when plant capital has been maintained over the five years, the depreciation charge for the fifth year equals the cost of replacing the initial investment at the beginning of the sixth year at the price level of 200. Briefly, we may conclude that if each "annual segment" of the original investment is recognized as depreciation cost in terms of its own replacement cost, the entire initial investment is eventually placed on the replacement-cost basis in the correct total amount. Recognition of full replacement cost depends upon maintenance of capital.

A related consideration is the fact that depreciable plant investments typically yield a continuous or recurring stream of benefits (revenue) over their useful lives. If an enterprise has not been suffering net losses after deducting adequate amounts for depreciation, it must be assumed that recovery of plant investment has been taking place from year to year in amounts equal to the depreciation deductions. To the extent that plant investments are recovered, the actual uses to which the funds are subsequently put will dictate the price-level adjustments that are appropriate for them.

Illustration II shows how failure to maintain plant capital may result in an inflation loss on capital held in the form of cash. Here it is assumed that no reinvestment is made after the initial investment of $5,000 in plant, but that cash in annual amounts equal to the annual depreciation charges is retained in the business until the end of the fifth year. By the end of the fifth year the price level is again assumed to be at 200. This hypothetical situation illustrates that the $10,000 replacement cost of the plant asset has been accounted for as $8,000 depreciation and $2,000 monetary loss on cash held. It illustrates also the general point that adjusted depreciation applies only to the unamortized balance of plant.

Since the benefits from most fixed assets are obtained continuously, a modification of the first illustration is presented. In Illustration III it is assumed that revenues are received evenly throughout each year, that reinvestments necessary to maintain plant capital are made on an average at the mid-year price level each year, and that expirations take place each year at the mid-year price level. In this way continuous depreciation and reinvestment

ILLUSTRATION II

Date	*Annual depreciation; also cash retained*	*Price level*	*Conversion factor at 12/31/5*	*Equivalent dollars at 12/31/5*	*Monetary loss from holding cash*
12/31/1	$1,200	120	200/120	$ 2,000	$ 800
12/31/2	1,400	140	200/140	2,000	600
12/31/3	1,600	160	200/160	2,000	400
12/31/4	1,800	180	200/180	2,000	200
12/31/5	2,000	200	200/200	2,000	—
	$8,000			$10,000	$2,000

Illustration III

	Adjusted depreciation by years				
Average index:	*110*	*130*	*150*	*170*	*190*
	Yr. #1	*Yr. #2*	*Yr. #3*	*Yr. #4*	*Yr. #5*
Plant investments:					
1/1/1 $5,000 5-year asset	$1,100	$1,300	$1,500	$1,700	$ 1,900
1/1/2 $1,100 4-year asset	$1,100	325	375	425	475
1/1/3 $1,625 3-year asset		$1,625	625	708	792
1/1/4 $2,500 2-year asset			$2,500	$1,417	1,583
1/1/5 $4,250 1-year asset				$4,250	4,750
7/1/5 $9,500 ½-year asset					$ 9,500
Final depreciation deduction—$9,500×200/190					$10,000

are simulated by converting the annual totals into equivalent lump-sum amounts at the respective mid-year points. For the fifth year this involves reinvesting a sum equal to the total depreciation taken at the mid-year price level for an average of one-half year. It can readily be seen how much easier it is to assume, for analytical purposes, that benefits are received in single amounts at the end of each year. Depreciation on the initial investment of $5,000 totals $7,500 under the above more realistic assumption with respect to revenue receipts. This example suggests the possible use of an average price level over a span of years in historical studies that attempt to measure possible deficiencies in unadjusted depreciation data.

Illustration IV shows that adjusted depreciation is adequate when the price level doubles in an irregular manner over the five-year period.

Illustration V proves that adjusted depreciation provides the proper deductions for the maintenance of capital when the price level rises for several years and then drops sharply during the fifth year.

Illustration VI shows that it is only a convenience to assume that all assets are retired at the end of the fifth year. In this case it is assumed that a five-year asset is bought each year. At the end of any year the sum of the depreciation just taken plus the unexpired plant capital, adjusted to the prevailing price level, is equal to the initial capital investment of $5,000 on an adjusted basis. The tabulation brings the picture to the end of the fifth year, concluding with the familiar total of $10,000 when the price level is at 200.

Illustration IV

	Adjusted depreciation by years				
Year-end index:	*110*	*120*	*160*	*170*	*200*
	Yr. #1	*Yr. #2*	*Yr. #3*	*Yr. #4*	*Yr. #5*
Plant investments:					
1/1/1 $5,000 5-year asset	$1,100	$1,200	$1,600	$1,700	$ 2,000
1/1/2 $1,100 4-year asset	$1,100	300	400	425	500
1/1/3 $1,500 3-year asset		$1,500	667	708	833
1/1/4 $2,667 2-year asset			$2,667	1,417	1,667
1/1/5 $4,250 1-year asset				$4,250	5,000
Revenue deduction at end of fifth year					$10,000

ILLUSTRATION V

	Adjusted depreciation by years				
Year-end index:	*120* *Yr. #1*	*140* *Yr. #2*	*160* *Yr. #3*	*180* *Yr. #4*	*120* *Yr. #5*
Plant investments:					
1/1/1 $5,000 5-year asset	$1,200	$1,400	$1,600	$1,800	$1,200
1/1/2 $1,200 4-year asset	$1,200	350	400	450	300
1/1/3 $1,750 3-year asset		$1,750	667	750	500
1/1/4 $2,667 2-year asset			$2,667	1,500	1,000
1/1/5 $4,500 1-year asset				$4,500	3,000
Revenue deduction at final retirement date					$6,000

ILLUSTRATION VI

	Adjusted depreciation by years				
Year-end index:	*120* *Yr. #1*	*140* *Yr. #2*	*160* *Yr. #3*	*180* *Yr. #4*	*200* *Yr. #5*
Initial plant investment:					
1/1/1 $5,000 5-year asset	$1,200	$1,400	$1,600	$1,800	$ 2,000
Subsequent plant investments that would be required to maintain initial investment:					
1/1/2 $1,200 5-year asset	$1,200	280	320	360	400
1/1/3 $1,680 5-year asset		$1,680	384	432	480
1/1/4 $2,304 5-year asset			$2,304	519	576
1/1/5 $3,111 5-year asset				$3,111	691
Fifth year depreciation					$ 4,147
Adjusted net plant balances on 12/31/5:					
1/1/2 asset—$240×200/120			$ 400		
1/1/3 asset—$672×200/140			960		
1/1/4 asset—$1,382×200/160			1,728		
1/1/5 asset—$2,489×200/180			2,765		
Total					5,853
Total at end of fifth year—revenue deduction on 12/31/5 plus net plant investment at that date					$10,000

ILLUSTRATION VII

	Adjusted depreciation by years				
Year-end index:	*120* *Yr. #1*	*100* *Yr. #2*	*90* *Yr. #3*	*80* *Yr. #4*	*70* *Yr. #5*
Plant investments:					
1/1/1 $5,000 5-year asset	$1,200	$1,000	$ 900	$ 800	$ 700
1/1/2 $1,200 4-year asset	$1,200	250	225	200	175
1/1/3 $1,250 3-year asset		$1,250	375	333	292
1/1/4 $1,500 2-year asset			$1,500	667	583
1/1/5 $2,000 1-year asset				$2,000	1,750
Revenue deduction in last year—equivalent to initial capital investment					$3,500

Adjusted Depreciation in a Recession

One of the important aspects of adjusted depreciation is its possible application during a recession or depression. In a time of falling prices fewer dollars would be needed to maintain plant capital, and consequently the adjustment of depreciation would lessen the decline in reported profits. Adjusted depreciation, when consistently applied at the reduced price levels, would still provide charges equal to the cost of replacing expired plant capital. In recent years tremendous amounts of plant investment have been made at unprecedented price levels—a sizeable portion of which, if a sharp fall in business activity should occur, might need either to be written down substantially or adjusted as to depreciation costs and balance-sheet values in terms of lower price levels. Illustration VII indicates how depreciation would be reduced year by year in a systematic and consistent manner on the basis of an objectively determined price index. A starting point of 100 is assumed, as in the above examples, and after a rise to 120 in the first year the price level steadily drops to 70. Here the depreciation charges in the last two years are quite modest when compared with those in prior illustrations. Nevertheless, they are theoretically sound in that the amounts are sufficient to maintain capital. It is possible that adjusted depreciation might favorably influence some managements to acquire more plant at low price levels and less at peak price levels.

In the 1930's the reduction of annual depreciation was widely effected, frequently in a drastic and haphazard fashion, by writing down plant assets. These properties were then left on the reduced depreciation basis for succeeding years, during which property values and prices in general not only recovered but rose materially above any level previously experienced. When our last depression-period experience is reconsidered, it is not unrealistic to argue that the preservation of systematic and comparable depreciation during and after any future depression period would depend upon some form of price-level adjustment. The recurrence of another wave of plant write-downs would be a step backwards in the general accounting for plant investment.

Price-Level Adjustments and the Balance Sheet

Price-level adjustment of income accounts alone is not in disagreement with the current emphasis upon reported income for the year. Income determination, however, is not really complete when the figure of net income has been obtained; the real objective of income determination is the rate of return on investment. That is, it is much more significant that a company has been earning 15% on its capital than that it has earned an average annual amount of a million dollars or $7.22 per share in recent years. Determining the rate of income calls for the price-level adjustment of plant and other asset accounts, a step that can be appended to the annual depreciation adjustments.

In years of rising prices the additional depreciation due to the price-level factor is credited to a "capital adjustment" account, and the depreciation based on original cost is credited to the allowance or reserve for depreciation. For the first year of Illustration I above the depreciation entry along these lines would be as follows:

Depreciation cost	1,200	
Allowance for depreciation—plant cost		1,000
Capital adjustment—absorbed plant inflation		200

For the purpose of disclosing the amount of depreciation based upon price-level adjustments, the capital credit is designated "absorbed" plant inflation cost. The account reflects the cumulative total of price-level adjustments to date in connec-

tion with the determination of depreciation on plant assets. For Illustration I the depreciation entries for the five years may be summarized as follows:

Year	Depreciation cost Dr.	Allowance for depreciation Cr.	Absorbed inflation Cr.
1	$1,200	$1,000	$ 200
2	1,400	1,000	400
3	1,600	1,000	600
4	1,800	1,000	800
5	2,000	1,000	1,000
	$8,000	$5,000	$3,000

Required plant balances at end of respective years

Year	Price level	Plant cost	Allowance for depr.
1	120	$ 6,000	$ 1,200
2	140	7,000	2,800
3	160	8,000	4,800
4	180	9,000	7,200
5	200	10,000	10,000

Price-level adjustments of the balance sheet may be added, if desired, to the accounts as adjusted to this point by the depreciation entries. They are similar to appraisal entries, in that the original plant cost and the allowance for accumulated depreciation are adjusted to the current price level, with the difference reflected as a capital adjustment. In this case, however, the capital adjustment is an "unabsorbed" amount, in the sense that it has not been deducted in determining net income or retained earnings. This unabsorbed capital-adjustment account is temporary in nature; as it is based upon unexpired plant capital, it ends up with a zero balance when the related plant assets are retired. The amount by which this particular capital-adjustment account is debited or credited is determined residually in the process of adjusting the plant and related account for accrued depreciation at the end of each year.

The process of adjusting the balance-sheet accounts is tabulated below for Illustration I. The required plant balances in the columns to the left provide the basis for the annual adjustments shown in the columns on the right.

Annual Adjustments

Plant cost Dr.	Allowance for depr. Cr.	Unabsorbed plant inflation Cr. (Dr.)
$1,000	$ 200	$ 800
1,000	600	400
1,000	1,000	—
1,000	1,400	(400)
1,000	1,800	(800)
$5,000	$5,000	$-0-

The adjustment for the first year can be explained as follows. At the end of the first year the plant investment on an unadjusted basis would appear as $5,000 original cost less $1,000 depreciation to date. When adjusted to the price level of 120, these amounts would be converted to $6,000 original cost less $1,200 depreciation. Since the cost entry above recognized $1,000 of the depreciation, only $200 would be added at this point, and the net write-up of $800 would be credited to "Capital adjustment—unabsorbed plant inflation." This temporary capital balance is eventually either absorbed as depreciation cost or erased by price-level declines. Such a result can be verified by applying these adjustments to a variety of price-level situations.

REPLYING TO "A FURTHER NOTE" ON JOINT COST ANALYSIS

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IN the July, 1957, issue of THE ACCOUNTING REVIEW, Gerald H. Lawson again labels as inaccurate certain aspects of my proposal that joint cost analysis may, under certain conditions, be of aid to management. A rebuttal is in order.

First, he again challenges the assumption of equal profitability of the various dollars invested in a joint product undertaking. Frankly, I (and others with whom I have consulted) find it difficult to unearth the meaning of his comments on this point. But is not investing in joint product production quite comparable to investing in a joint venture?[1] If X invested $20 and Y $40 in such a venture and a profit resulted, is it possible to assume that X's dollars earned a rate of profit different from that earned by Y's?[2] Or that some of X's dollars earned more or less than the rest of his investment? Such assumptions would lack common sense.

As to Mr. Lawson's comment that my second illustration refutes the suggestion that each dollar is equally profitable, I call attention to the answer I already gave to that claim in my "Reply" on page 593 of the October, 1956, issue of THE ACCOUNTING REVIEW. That second illustration was revealed as one not properly regarded as a joint product situation. This was also pointed out in my original article.

Mr. Lawson states that his objections are "to accounting techniques, generally, which attempt to arrive at an individual cost and profit for each of a series of joint products." Nevertheless, such costing and eventual profit determination are necessary where joint products are carried in year-end inventories in quantities not proportional to their production. But that is not a concern of my proposal anyway. My claim is that *the technique can be used to disclose whether or not a joint cost situation actually exists*. When the calculation shows a "loss" for one product, then the situation is *not* one that should be regarded as involving joint products, for more profit could result by devoting the same amount of investment to processing only the item not showing a "loss."

Quoting further from Mr. Lawson's article, he states: "The essence of my argument in this respect is that once joint processing has been undertaken, any product which will produce sales revenue in excess of separate processing costs should be subjected to further processing." This, he claims, is what I have not understood; but I am afraid, on the contrary, that it is he who has failed to understand my contention. Would he have us believe that if a producer of pig iron could use the slag to manufacture cement at (say) a net gain of 1/10¢ a barrel, he would logically do so even if he could make much more profit by putting that same amount of additional investment to work producing more pig iron? Or that the many small lumber mills up and down the Pacific Coast, fouling the air with their burning of sawdust, should install plants to produce "Presto-Logs" from the sawdust if such logs could be sold at a small profit, even though that same

[1] In both, there is a joint investment with two or more "interests" merged together and yet a need for apportioning gains between the several "interests."

[2] One or more of the venturers might be paid or credited for special service, such as devoting more time to the operation, or for special ability or knowledge; but that should not affect the relative earnings ascribed to the various dollars invested.

capital could be more profitably invested in expansion of the lumber mill or the forest properties?

After puzzling considerably over his article, I am forced to conclude that Mr. Lawson is deliberately attacking a procedure without regard to a new use being proposed for it. I do not state anywhere that joint cost accounting procedure produces accurate costs. I do state, however, that if one of two possible joint products can absorb all the so-called joint costs and still provide more profit with a given limited investment than can be had by processing both products, then (other things being equal) a sensible business man will produce only the one product. And the procedure outlined in my original article has the merit of disclosing such a possible situation.

LEGAL CONCEPTS OF THE CORPORATION

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Accounting analyses and generally accepted accounting practices have been influenced to a considerable extent by the law. The widespread practice of accounting separately for "stated capital" and "paid-in surplus," unique legal concepts, is one of many examples of this influence. It is important, therefore, that in the evaluation of proposed accounting procedures accountants be aware of the status of the law.

References are frequently made in the accounting literature to *the legal view of the corporation*[1] as though there was a single clearly defined concept unanimously recognized and utilized as the basis for legal analyses. Recently, I conducted a comprehensive survey of the legal literature to determine the extent to which those in the field of law have accepted the concept of the corporation as a legal entity which has an independent existence quite separate and distinct from its officers and stockholders and the extent to which other concepts have been advocated. Because the significance of a legal concept ultimately depends upon its application in arriving at judicial decisions, the survey included the examination of cases where the court's concept of the corporation was a material factor in arriving at its decision. The results of the survey suggest that considerable caution is warranted in the evaluation of the acceptability of accounting procedures which hinge upon a particular legal interpretation. Specifically, the results of the survey suggest that the acceptability of accounting analyses cannot with confidence be based entirely upon a particular legal concept of the corporation. This article is a report of that survey.

Unwarranted significance is often attributed to the term "legal entity." The legal aspect of the process of incorporation is one of complying with certain specified requirements contained in the statutes of the state in which incorporation is desired. Typically, a major requirement is the filing of articles of incorporation by the incorporators with the secretary of the state. The articles of incorporation describe the corporation to be formed—its name, its purpose, its location, a detailed description of the shares of stock to be authorized, and other prescribed information. If the articles are found to be in conformity with the statutory requirements, the secretary of the state of incorporation then issues a "certificate of incorporation" and the corporate existence legally begins. In law, "legal entity" is defined as legal existence.[2] Clearly, the corporation has a legal existence upon the issuance of the certificate of incorporation.[3]

[1] See, for example: ". . . it should be emphasized that the law views the corporation as an entity, separate and distinct from its members." William A. Paton, *Essentials of Accounting* (rev. ed.; New York: The Macmillan Company, 1949), pp. 4–5; ". . . an ordinary corporation is considered at law to be an artificial person separate from its stockholders, . . ." Donald H. Mackenzie, *The Fundamentals of Accounting* (rev. ed.; New York: The Macmillan Company, 1956), p. 487; "In the eyes of the law . . . the corporation is a separate legal entity—entirely distinct from the stockholders who make it up." Perry Mason and Sidney Davidson, *Fundamentals of Accounting* (3rd ed., Brooklyn: The Foundation Press, Inc., 1953), p. 7, "The term 'legal entity' is a phrase used to describe the situation where a business enterprise is viewed by the law as being separate and distinct from the owners thereof, and having a personality created either by statute or court decision." George Hillis Newlove and S. Paul Garner, *Advanced Accounting*, Vol. I (Boston: D. C. Heath and Company, 1951), p. 15.

[2] *Black's Law Dictionary*, 4th ed. See also *Department of Banking v. Hedges et al.*, 286 NW 281 (1939).

[3] A corporation which has been duly formed in conformity with the statutes of the state of incorporation is said to be a *de jure* corporation. Under certain circumstances, a corporation not so formed may have legal recognition and is said to be a *de facto* corporation. Also, for certain purposes, a corporation may be deemed to exist by estoppel. The legal entity of a *de jure* cor-

The significance of the establishment of legal entity lies in the powers bestowed by the state statutes upon the duly organized corporation. In the interests of justice, however, the courts have found it necessary to look beyond the mere fact of legal entity and to render decisions conditioned, at least in part, by underlying concepts of the corporate form of organization. Thus, discussions and controversies concerning the underlying nature of the corporation have developed and may be found in abundance in legal literature and judicial decisions.

The most popularly advocated concepts are, one, that the legal entity is an independent existence quite distinct and separate from its officers and stockholders and, two, that the legal entity is merely a convenient arrangement for dealing with the association of individuals actually composing the corporation. A more detailed discussion of these concepts, as found in law, follows.

There are two other concepts found in the legal literature which also merit consideration. These are the suggestions that "corporation" merely refers to a particular set of legal relations and, secondly, that the corporation is basically an economic institution rather than a legal body.

CONCEPT OF SEPARATE AND DISTINCT ENTITY

Clearly, the corporation concept most frequently expressed in judicial decisions is that the corporation is a legal entity separate and distinct from the corporation officers and stockholders. It cannot be said with equal confidence, however, that this is the predominant view among authors of treatises on corporation law or writers of articles appearing in legal periodicals. And, among those who regard the corporation as a separate entity, there is considerable disagreement as to whether the entity is *created* by the state or merely recognized by the state and whether the entity is a *fiction* or is a *reality*. Because the courts are usually silent as to these finer points the practical legal significance of these differences is not easy to assess. Such distinctions are, however, the basis of a vast amount of discussion in articles and books dealing with corporation law.

There are three different theories of the separate and distinct legal entity: the "fiction theory," the "concession theory," and the "realistic theory."

The theory of the fictitious legal person apparently originated with Pope Innocent IV in the thirteenth century. The doctrine was stated as the reason why corporate bodies or *universitas* could not be punished or excommunicated—they had neither a soul nor a body and had being only *in abstracto*.[4] A leading proponent of this view was the German law scholar, Savigny, who wrote in the early nineteenth century and adopted this theory based on his study of early Romen law.[5] The essence of the so-called fiction theory is that when a corporation is formed an artificial or fictitious person or personality is created which is separate and distinct at law from the natural persons whose interests it embraces.

A closely related theory emphasizes that a corporation cannot arise out of a mere agreement between the members but can exist only as a creature of the state, the result of the gift of the franchise by the state. The franchise being in the nature of a concession from the sovereign, this has been referred to as the "concession theory" or "sovereign theory."

While often confused with the fiction theory, the concession theory had a differ-

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poration is clear. The legal entity of a *de facto* corporation or corporation by estoppel is a matter for determination by the courts.

[4] John Dewey, *Philosophy and Civilization* (New York: Minton, Balch and Company, 1931), pp. 152–159.

[5] A complete discussion of the Savigny theory may be found in Frederick Hallis, *Corporate Personality: A Study in Jurisprudence* (London: Oxford University Press, 1930), Pt. I, chap. i.

ent origin. It is essentially a product of the rise of the national state at a time when religious congregations and guilds were rivals of the claim of the national state to complete sovereignty. The restricting of capacity to act as a corporation only to those bodies having positive authorization represented a check on the tendency of group action to undermine the liberty of the individual by unfair practices or to rival the political power of the state.[6]

In summarizing the differences between corporations and partnerships, joint stock companies and business trusts, Wormser says:

> If there is one element more than any other which stands out glaringly it is that the underlying characteristic of all corporations is the corporate "franchise" granted by the sovereign. It is this franchise which confers artificial legal personality, immunity from individual liability and responsibility on the part of the stockholders, and continuous, even perpetual, succession. The franchise which grants these valuable privileges and immunities necessarily involves the assumption of corollary duties and obligations to the sovereign. The legal vassal created by the sovereign owes obligations of fealty and utmost good faith to its creator.[7]

The concession theory has also been expounded in judicial decisions. For example, in a United States Supreme Court case, on the grounds that the corporation might be incriminated, an individual who was an officer of a corporation refused to produce documentary evidence, consisting of correspondence, records and accounts of the corporation, which had been subpoenaed by a grand jury. Associate Justice Henry Billings Brown delivered the opinion of the court:

> . . . the corporation is a creature of the State. It is presumed to be incorporated for the benefit of the public. It receives certain special privileges and franchises, and holds them subject to the laws of the State and the limitations of its charter. Its powers are limited by law. It can make no contract not authorized by its charter. Its rights to act as a corporation are only preserved to it so long as it obeys the laws of its creation. There is a reserved right in the legislature to investigate its contracts and find out whether it has exceeded its powers. It would be a strange anomaly to hold that a state, having chartered a corporation to make use of certain franchises, could not in the exercise of its sovereignty inquire how these franchises have been employed, and whether they had been abused, and demand the production of the corporate books and papers for that purpose.[8]

A third group agrees that the corporate entity is separate and distinct from the corporation stockholders and officers but further insists that it is not artificial, but natural, not fictitious, but real. It is maintained that the corporation has a will of its own and a volition identifiable from the individual volitions of the stockholders. It is believed that the real entity comes into existence when the group comes into existence, and it does not depend upon the state to create it even though its legal status must necessarily depend upon recognition by the state.

The leading proponent of this view was another German scholar of the law, Otto von Gierke, who lived near the end of the nineteenth century.[9] A number of English and American writers have supported the reality doctrine, however, and the courts have found some occasion to express it.

An example of judicial expression is a 1943 case before the Supreme Court of Minnesota. The Minnesota Tribune company published the ***Minneapolis Morning Tribune*** and other newspapers. In 1941, this company transferred all of its assets to the Star-Journal Company, another newspaper publishing firm, and the actual printing of the ***Minneapolis Morning Tribune*** was transferred to the Star-Journal

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[6] Dewey, *op. cit.*, pp. 152–159, and Robert S. Stevens, *Handbook on the Law of Private Corporations* (2d ed.; St. Paul: West Publishing Co., 1949), pp. 6–8.

[7] I. Wormser, *Frankenstein, Incorporated* (New York: McGraw-Hill Book Company, Inc., 1931), pp. 76–77.

[8] *Hale v. Henkel* 201 US 74–75 (1906).

[9] Otto Friedrich von Gierke, *Political Theories of the Middle Age*, trans. Frederic William Maitland (Cambridge: University Press, 1900).

building. Two Minnesota Tribune Company employees, whose employments were transferred to the Star-Journal Company without any loss of work, brought suit against the Minnesota Tribune Company for severance pay on the grounds that the sale of its newspaper assets constituted a dismissal. The defendant Minneapolis Tribune Company continued in existence as the holder of one-third of the stock of the Star-Journal Company and claimed severance had not been effected.

The court, in deciding in favor of the plaintiffs, the two employees, said:

> Defendant's position becomes untenable when we consider that it and the new Star-Journal and Tribune Company are distinct and separate entities. The nature of a corporation is such that it is an entity separate and distinct from the body of its stockholders. . . . It is not a fiction of the law but a real legal unit possessing individuality and endowed by the law with many of the attributes of persons. . . . The transfer of interest was as complete and effective as it would have been if the Tribune Company had received no stock in the Star-Journal Company.[10]

These three theories—the fiction theory, the concession theory, and the reality theory—may be considered together because they are in agreement as to the separate and distinct nature of the legal entity. As indicated earlier, there is much discussion in the literature based on the differences between these three theories. It is felt by some, however, that whether the legal entity is fictitious or real, or is created by the state or merely recognized by the state, is relatively insignificant. As Wormser says,

> Practical minds generally have refused to enter into any discussion of whether the incorporeal person is a fiction or a reality. They regard this as just as foolish as discussing whether a jackass located midway between two bundles of hay will turn to one or the other, or as profitless as the medieval discussion of how many angels could dance on the point of a needle.[11]

And John Chipman Gray said:

> Whether a corporation is a fictitious entity, or whether it is a real entity with no real will, or whether, according to Gierke's theory, it is a real entity with a real will, seems to be a matter of no practical importance or interest. On each theory the duties imposed by the state are the same and the persons on whose actual wills those duties are enforced are the same.[12]

In support of this view, shared by Wormser and Gray, it may be noted that the judicial decisions from which the preceding citations were excerpted were probably not dependent upon the real or fictitious nature of the corporation. The notion of separate and distinct corporate entity, however, is a concept of considerable practical importance. This may be demonstrated without further consideration of the fiction, concession, or reality which might be involved. There are a large number of judicial decisions in which this concept has been expressly adopted. Only three of these are noted here as samples of the extreme circumstances in which this concept of the corporation has been upheld.

In the state of Virginia some land, the deed to which contained a covenant to the effect that the title to the land was never to be vested in a Negro or Negroes, was purchased by a corporation whose capital stock was held exclusively by Negroes. The purchase was for the express purpose of converting the property into an amusement park for Negroes. An individual brought suit to have the covenant enforced and the conveyance to the corporation canceled. The Virginia Supreme Court of Appeals, in 1908, in holding in favor of the corporation, cited Cook's concept: "A corporation is an artificial person, like the state. It is a distinct existence—an existence separate from that of its stockholders

[10] *Matthews et al. v. Minnesota Tribune Co.*, 10 NW (2d) 232 (1943).
[11] Wormser, *op. cit.*, p. 60.

[12] John Chipman Gray, *The Nature and Sources of the Law* (2d ed.; New York: The Macmillan Company, 1927), p. 55.

and directors."[13] The court found that because "a corporation is a person which exists in contemplation of law only, and not physically" the sale of the land to the corporation was not a sale to a Negro or Negroes.[14]

A case not unlike the Virginia case arose in England after the outbreak of the First World War. A company which was incorporated in England but the capital stock of which was held, all but one share, by German subjects residing in Germany and the directors of which were also German residents and citizens, sued to enforce payment of a debt. The defendant admitted the debt but resisted payment on the grounds that inasmuch as it was unlawful to have commercial intercourse with alien enemies, payment to the corporation was illegal. Lord Reading, speaking for the court, said:

> The fallacy of the appellants' contention lies in the suggestion that the entity created by statute is or can be treated during the war as a mere form or technicality by reason of the enemy character of its shareholders and directors. A company formed and registered under the Companies Acts has a real existence with rights and liabilities as a separate legal entity. It is a different person altogether from the subscribers to the memorandum or the shareholders on the register. . . . Once it is validly constituted as an English company it is an artificial creation of the Legislature and it retains its existence for all intents and purposes. It is a living thing with a separate existence which cannot be swept aside as a technicality. It is not a mere name or mark or cloak or device to conceal the identity of persons. . . . It is a legal body clothed with the form prescribed by the Legislature.[15]

Even more recently, in 1933, the following circumstances were brought before the Supreme Court of Massachusetts: A contract between a corporation and a labor union provided that the corporation should employ union members only. Some time later, because it was thought the union was allowing other employers to pay lower wages, a new corporation was organized to carry on the business as an open shop, free of the obligations under the union contract. The same officers and shareholders held the same offices and number of shares in the new corporation as they had held in the old. The first corporation sold its property to the second corporation; the first corporation relinquished its lease and the second corporation took a new lease on the same premises; the first corporation discharged its employees and the second corporation employed a force of nonunion men. The union sued the two corporations to enjoin violation of their contract but the court held in favor of the corporations, saying:

> The motive of the officers, directors and stockholders of the old corporation, as individuals, that is, the desire of these incorporators of the new corporation to secure through the instrumentality of a corporation authority to do business exactly like the business done by the old corporation without the burden of the commercial agreement as to the employment of union labor, cannot be regarded as fraudulent in fact or in law. Corporations, like individual stockholders, are distinct entities; neither can be treated as agents of the other when openly contracting for themselves and in their own names. . . . In the absence of a fraudulent purpose in the organization of a corporation, it is settled law in this Commonwealth that the ownership of all the stock and the absolute control of the affairs of a corporation do not make that corporation and that individual owner identical. Nor do such ownership and control make the property of the corporation subject to the payment of the stockholders' debts," nor subject the corporation to liability upon contracts which it has neither executed nor assumed.[16]

ASSOCIATION OF INDIVIDUALS CONCEPT

Throughout the long history of corporation law the view has also persisted that

[13] William W. Cooke, *A Treatise on the Law of Corporations Having a Capital Stock* (8th ed.; New York: Baker, Voorhis & Co., 1923), I, 2.

[14] *People's Pleasure Park Co., Inc. et al. v. Rohleder*, 61 SE 794 (1908).

[15] *Continental Tyre and Rubber Co., Ltd. v. Daimler Co.*, 1 KB 903–904 (1915).

[16] *Berry v. Old South Engraving Co.*, 186 NE 604–605 (1933).

corporations are merely associations of individuals united for a common purpose and permitted by law to use a common name. For convenience, the corporation may be considered a "legal entity" or "legal person" but this convenient designation is not meant to obscure the fact that the corporation itself is the association of individuals interested in it as stockholders.

This concept of the nature of the corporation has been expressed by many noted scholars in the field of corporation law. It can best be explained in the words of those who advocate it. Among the first to record this view was Kyd, who did so in 1793 in the following fashion:

> A corporation then, or a body politic, or body incorporate, is a collection of many individuals, united into one body, under a *special denomination*, having perpetual succession under an *artificial form*, and vested, by the policy of the law, with the capacity of acting, in several respects, as an *individual*, particularly of taking and granting property, of contracting obligations, and of suing and being sued, of enjoying privileges and immunities in *common*, and of exercising a variety of political rights, more or less extensive, according to the design of its institution, or the powers conferred upon it, either at the time of its creation, or at any subsequent period of its existence.[17]

About a century later, in 1886, Morawetz subscribed to this concept by writing:

> A legally constituted corporation is ordinarily treated at law, as well as in the transaction of ordinary business, as a distinct entity or person, without regard to its membership. In most cases this is a just as well as convenient means of working out the rights of the real persons interested; however, it is essential to a clear understanding of many important branches of the law of corporations to bear in mind distinctly, that the existence of a corporation independently of its stockholders is a fiction; and that the rights and duties of an incorporated association are in reality the rights and duties of the persons who compose it, and not of an imaginary being.[18]
>
> . . . .
>
> The statement that a corporation is an artificial person, or entity, apart from its members, is merely a description, in figurative language, of a corporation viewed as a collective body: a corporation is really an association of persons, and no judicial dictum or legislative enactment can alter this fact.[19]

In an article first published in the *Columbia Law Review* in 1909, and later included in a collection of his essays which was published in 1923, Hohfeld stated:

> When all is said and done, a corporation is just an association of natural persons conducting business under legal forms, methods, and procedure that are *sui generis*. The only conduct of which the state can take notice by its laws *must* spring from natural persons—it cannot be derived from any abstraction called the "corporate entity." To be sure, the conduct of those individuals will be different when they are cooperating in their collective or corporate projects than when they are acting independently of one another—in a word, the "psychical realities" will be different; but ultimately the responsibility for all conduct and likewise the enjoyment of all benefits must be traced to those who are capable of it, that is, to *real* or *natural* persons. When, therefore, in accordance with the customary terminology, we speak of the corporation, as such, as contracting in the corporate name, as acquiring, holding, and transferring property, and suing and being sued, and when we speak of stockholders as mere claimants against the corporation, holding stock which is a species of personal property—and so on indefinitely—we are merely employing a short and convenient mode of describing the complex and peculiar process by which the benefits and burdens of the corporate members are worked out.[20]

More recently, in 1949, Stevens presented a strong case for the association of individuals concept and advocated a common basis of analysis for the problem of unincorporated as well as incorporated associations.

> The banishment of the medieval conception of a corporation as a fictitious nonphysical person and the admission that corporate personality is

[17] Stewart Kyd, *A Treatise on the Law of Corporations* (London: J. Butterworth, Fleet Street, 1793), p. 13.

[18] Victor Morawetz, *A Treatise on the Law of Private Corporations* (2d ed.; Boston: Little, Brown, and Company, 1886), I, 3.

[19] *Ibid.*, p. 221.

[20] Wesley N. Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning and Other Legal Essays*, ed. by Walter Wheeler Cook (New Haven: Yale University Press, 1923), pp. 198–200.

attributed to the shareholder would be accompanied by a more general recognition that individuals other than corporate shareholders have dual legal personalities.[21]

. . . .

The more realistic view, that a corporation is but a group of individuals associated under legal sanction, eliminates the difficulties arising from the alleged difference between the physical characteristics of an individual and the nonphysical character of a corporation.[22]

This concept of the corporation as an association of individuals has likewise been prominent in judicial decisions. A few illustrations of its application in practice follow.

In 1874, the Baltimore and Potomac Railroad Company constructed an engine house and machine shop in Washington, D.C., within a few feet of the building of the Fifth Baptist Church, a private corporation. Among other things, sixteen engine house smokestacks were constructed lower in height than the windows of the main room of the church. The noise, smoke, cinders, dust, and offensive odor greatly annoyed and gradually diminished the congregation, so the corporation, the Fifth Baptist Church, sued the railroad for damages. In its charge to the jury, the trial court stated: "The suit is brought by a congregation duly incorporated and they have brought an action to recover damages for their inconvenience and discomfort in consequence of the acts of the defendant. It is the personal discomfort more than anything else which is to be considered in regard to the assessment of damages."[23] The defendant urged, on the other hand, that the jury be instructed that "the plaintiff could not recover, being a corporation, for any inconvenience which members of the congregation assembled in its church might suffer from the noise and offensive odors occasioned by the defendant's engines and shops."[24] The trial court refused to give such instructions and the jury found for the plaintiff. The judgment was appealed and ultimately affirmed by the United States Supreme Court in 1883. Associate Justice Stephen J. Field delivered the opinion which was, in part, as follows:

The right of the plaintiff to recover for the annoyance and discomfort to its members in the use of its property, and the liability of the defendant to respond in damages for causing them, are not affected by their corporate character. Private corporations are but associations of individuals united for some common purpose, and permitted by law to use a common name, and to change its members without a dissolution of the association. Whatever interferes with the comfortable use of their property, for the purposes of their formation, is as much the subject of complaint as though the members were united by some other than a corporate tie.[25]

In a case decided by the Supreme Court of Ohio in 1900, a stockholder of the Cincinnati Volksblatt Company requested permission to inspect its books and records. The request was refused on the grounds that the request was not in good faith. The stockholder then brought suit against the corporation. Judge William T. Spear, in reciting the opinion in favor of the stockholder, had this to say:

. . . the rights of the plaintiff in this case are based upon a recognition of his standing as an integral part of the corporation. The idea that the corporation is an entity distinct from the corporators who compose it, has been aptly characterized as "a nebulous fiction of thought." Much learning has been indulged in and much space occupied by textwriters and others in an effort to differentiate the essential character of a corporation from that of its stockholders, and great ingenuity has been displayed in the argument, but it has been in the main a fruitless metaphysical

[21] Stevens, *op. cit.*, p. 45.

[22] *Ibid.*, p. 51.

[23] *Baltimore and Potomac Railroad Company v. Fifth Baptist Church*, 108 US 323 (1883).

[24] *Ibid.*, pp. 325–326.

[25] *Ibid.*, pp. 329–330. The statement "Private corporations are but associations of individuals united for some common purpose, and permitted by law to use a common name, and to change its members without a dissolution of the association" was cited in support of a similar United States Supreme Court decision in a later case, *United States v. Trinidad Coal and Coking Company*, 137 US 169 (1890).

discussion. For the purpose of description and in defining corporate rights and obligations, and characterizing corporate action, the fiction that the corporation is an artificial person or entity, apart from its members, may be convenient and possibly useful, but in the opinion of the writer the argument favoring the essential separate entity of the corporation fails, and it is believed that the effort has resulted in misleading conceptions and in much confusion of thought upon the subject.[26]

In 1931, the Metropolitan Holding Company, Inc., was organized by the directors of the Vandeventer National Bank to purchase shares of the same Vandeventer National Bank which were then held by the financially unsound Vandeventer Securities Company. It was planned that this bank stock would be resold at a profit and the profit would be paid into the bank to restore its impaired capital. In 1932, the Comptroller of the Currency determined that it was necessary to enforce the statutory "double liability" of the stockholders of the Vandeventer National Bank and ordered an assessment to the extent of the par value of its outstanding shares. The Holding Company failed to pay the assessment on shares still held by it and proceedings were instituted for the collection of the assessment from the stockholders of the Holding Company. In finding the stockholders of the Holding Company liable, the court stated:

> There has been a growing tendency upon the part of the courts to disregard corporate entity and to treat the stockholders thereof as an association of individuals when the interests of justice are to be served.[27]

THE CORPORATION AS A SET OF LEGAL RELATIONS

The legal literature of the past thirty years reveals attempts by some writers to establish a concept of the corporation more in keeping with modern developments. In particular there is evident discontent arising from attempts of the courts to maintain the sanctity of the separate and distinct corporate entity only to find that the corporate entity must be disregarded if justice is to prevail. Terms such as "piercing the corporate veil" and "disregard of the corporate entity" have become commonplace in judicial decisions and legal literature. It must be mentioned also, however, that some writers have argued that the separate and distinct nature of the corporate entity should be upheld and that disregard by the courts has been unnecessary.[28]

At least two new concepts have emerged, or are emerging as these modern developments in corporation law take place. Some writers and judges suggest that it is futile to attempt to personify the corporation—to look upon the corporation as some kind of legal person or entity. Whether it be real or fictitious, "corporation" should be accepted merely as a convenient term indicating a given set of legal relations. Whether it is a "corporation sole" a "corporation aggregate," an "association of individuals," or a "separate and distinct legal entity" is not relevant—the act of incorporation endows the business enterprise with certain immunities and privileges prescribed by statute and common law.

A second group of writers advocate the recognition of the "economic entity" rather than the "legal entity." The economic entity theory has been discussed and illustrated particularly in connection with problems arising from the parent-subsidiary relationship of a group of two or

[26] *The Cincinnati Volksblatt Company v. Hoffmeister*, 62 Ohio 200–201 (1900).

[27] *Metropolitan Holding Company v. Snyder*, 79 Fed (2d) 266 (1935).

[28] See George F. Canfield, "The Scope and Limits of the Corporate Entity Theory," *Columbia Law Review* XVII (February, 1917) 128–143, and George S. H. Sharratt, Jr., "Corporations—Nature and Theory—Why Corporate Entity?" *Missouri Law Review*, I (June, 1936), 278–281.

more affiliated corporations. It has been suggested that such a group of corporations be recognized as a single economic enterprise and dealt with, in law, as a single economic entity rather than as separate and distinct legal entities. But the theory is deemed applicable in many other branches of corporation law as well.

Perhaps the clearest expression of the view of the corporation as merely a set of legal relations is that of Judge Nathan Bijur of the New York State Supreme Court in 1927 in the case of ***Farmers' Loan and Trust Co. v. Pierson et al.*** The nature of the corporation was very much in issue in this case. The trustees of an estate, the assets of which consisted solely of all the outstanding shares of a corporation, elected themselves directors of that corporation, and then, refusing to account to the beneficiaries of the estate for their management of the corporation, restricted their accounting for the estate to the continuing custody of the stock and the receipt of dividends. The beneficiaries urged that they were entitled to know from the trustees, to a reasonable extent, all facts concerning the management of the corporation which was being conducted by the trustees under their title as directors. The trustees, on the other hand, offered the existence of the corporation as their reason for declining to follow the ordinary course of trustees, namely, the giving of a full account of their substantial acts.

In his decision, Judge Bijur reviewed the concepts referred to earlier in this article (fiction theory, concession theory, reality theory, and the association-of-individuals concept) and concluded:

> My conclusion from the foregoing review is that the law has neither a "personality" nor an "entity" to deal with, and that there is no "veil." These terms are useful as metaphors or figures of speech to meet a common need in discussing the legal principles involved. . . .[29]
>
> . . . .
>
> . . . a corporation is more nearly a method than a thing, and . . . the law in dealing with a corporation has no need of defining it as a person or an entity, or even as an embodiment of functions, rights and duties, but may treat it as a name for a useful and usual collection of jural relations, each one of which must in every instance be ascertained, analyzed and assigned to its appropriate place according to the circumstances of the particular case, having due regard to the purposes to be achieved. A confirmation of the accuracy of this analysis of the corporation form is found in the fact that the word "corporation" has a variable, not a constant, meaning.[30]

The central theme of this statement was given favorable recognition a few years later by Surrogate Wingate when in discussing concepts of the corporation he said, "Perhaps the best of all is the statement of Mr. Justice Bijur that it [corporation] is merely 'a name for a useful and usual collection of jural relations'."[31]

After his survey of the historical background of the "corporate legal personality," John Dewey concluded:

> As far as the historical survey implies a plea for anything, it is a plea for disengaging specific issues and disputes from entanglement with *any* concept of personality which is other than a restatement that such and such rights and duties, benefits and burdens, accrue and are to be maintained and distributed in such and such ways, and in such and such situations.[32]

Henry O. Taylor also conceives of the corporation as a set of legal relations:

> . . . a corporation is to be regarded as a legal institution. In this sense it means the sum of legal relations existing in respect to the corporate enterprise. Let us analyze the term "legal institution." It denotes a body of legal rules in their manifestations in legal relations between persons as to whom certain mutually related conditions of act may be affirmed.[33]
>
> . . . .

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[29] *Farmers' Loan and Trust Co. v. Pierson et al.*, 222 NYS 543 (1927).

[30] *Ibid.*, 543–544.

[31] *In re Steinberg's Estate*, 274 NYS 919 (1934).

[32] Dewey, *op. cit.*, p. 159.

[33] Henry O. Taylor, *A Treatise on the Law of Private Corporations* (5th ed.; New York: The Banks Law Publishing Co., 1905), pp. 18–19.

> . . . a corporation, considered as a legal institution, is the sum of the legal relations resulting from the operation of rules of law in its constitution upon the various persons, who by fulfilling the prerequisite conditions, bring themselves within the operation of these rules.[34]

Another writer, advocating that less significance be placed upon prevailing corporate concepts, expressed the opinion that "the defects of the intransigent conceptualism which apparently accompanies the entity technique is of itself a source of danger in legal thinking."[35] The theme of his discussion was that decisions should not be based on either the existence or disregard of the corporate entity but rather on the facts of the case.

> A corporation, then, like any composite whole, may present different aspects for different purposes. For some purposes the attention is directed to the entity as an organized collectivity, and, while the identity of the individual stockholders is not denied, it is really immaterial to the purposes at hand. There is no fatal objection to framing this thought somewhat differently, by familiarly saying that the entity is separate and distinct, other than the danger that in a later situation too much significance be credited to the statement in that form. For other purposes the identity of the individual stockholders becomes important just as do for some purposes the component parts of a house or a ship, and then one does not say that the corporation is an entity separate and distinct from its stockholders.[36]

He characterized the corporate entity as "but a name by which a complex can be dealt with in discourse, a simple device of securing limited liability and facilitating reference to a complicated group of relations."[37]

CONCEPT OF ECONOMIC ENTITY

The central notion of the concept of economic entity is the substitution of economic realities for prevailing juridical concepts. As modern business has developed increasing use has been made of the corporate device as a "nonconductor" between the stockholder and the business enterprise. It has become increasingly more difficult for the courts to adhere to the widely accepted concept of the corporation as a separate and distinct entity. In order to mete justice the courts have found it necessary to disregard the corporate entity and examine reality. In the words of Berle, "The corporation is emerging as an enterprise bounded by economics, rather than as an artificial mystic personality bounded by forms of words in a charter, minute books, and books of account. The change seems to be for the better."[38]

The recognition of the economic entity by the courts is well illustrated by a recent case. The Pittsburgh Railways *System* was created, in 1902, without its own corporate charter, by means of leases and operating agreements with a large number of corporations, referred to as "underliers." The properties were operated by the Pittsburgh Railways *Company* in conjunction with its own. In 1938, the *Company* filed a petition for reorganization under the Bankruptcy Act. No proceedings were filled by or against any of the underliers so, in order to maintain a unified system of transportation for Pittsburgh and surrounding municipalities, the City of Pittsburgh petitioned the District Court to exercise jurisdiction over the underlier corporations. Some of the underliers moved to dismiss the petition but the petition was granted by the Court of Appeals. In his opinion, Judge Herbert F. Goodrich said:

> As we see the question, the issue is whether the demand of the facts is to control or whether obeisance must be made to the doctrine of the sepa-

[34] *Ibid.*, p. 25.
[35] Elvin R. Latty, *Subsidiaries and Affiliated Corporations* (Chicago: The Foundation Press, Inc., 1936), p. 27.
[36] *Ibid.*, pp. 15–16.
[37] *Ibid.*, p. 15.
[38] Adolph A. Berle, Jr., "The Theory of Enterprise Entity," *Columbia Law Review*, XLVII (April, 1947), 345.

rate corporate entities of all these concerns which, from the business point of view, constitute one operation and one enterprise. . . .[39]

. . . .

Our conclusion is that the facts of the present case call for the treatment of this great transportation system as one entity for purposes of reorganization, regardless of the elaborate jig-saw puzzle arrangement of all the underlying companies which have gone into it. In so concluding we emphasize the nearly half century of physical operation of this enterprise as a unit, with the interchange of movable property, routes, operating personnal and everything involved on the business side. We recognize the necessity of the unitary economic foundation for it. . . . We are concerned with the realities of the situation. . . . We think that the many years of factual unity and the public necessity for the measures which will insure the proper economic foundation for the system, override the arguments for the recognition of the legal concept of separate entity on the part of the underliers.[40]

Another case has been cited as an example of the courts' recognition of the economic entity where one individual owns substantially all the stock of a corporation.[41] In *Wood v. Guarantee Trust and Safe Deposit Company*, Starr owned all but 500 shares of the stock of the City of Joliet Water Works Company. Using money which ought to have been applied to the payment of materials used in construction of the water works, Starr acquired some past-due coupons from holders of the Water Works Company bonds. These coupons were, in turn, transferred to Wood in payment of the construction materials. When Wood presented the coupons, payment was refused on the grounds that the coupons were effectively "extinguished, cancelled, and paid" when Starr purchased them. Associate Justice Lamar of the United States Supreme Court delivered the opinion of the court which was unfavorable to Wood and from which the following remarks have been excerpted:

Starr is essentially (that is, from a business point of view) the Water Works Company, owning as he does, 19,500 of its 20,000 shares of stock. Its prosperity is manifestly his prosperity, its disaster his disaster, and any disbursement made by it is substantially made by him.[42]

. . . .

The same consideration of the substantial identity between Starr and the Water Works Company is of great weight in the determination of the remaining question. . . .[43]

The case before us is a peculiar one, and must be adjudged on its own facts. As we have already said, Starr was, from a business point of view, substantially the company. Not only was it his object to float the bonds, but to float the company, as well.[44]

The court looked upon Starr, an individual, and the Water Works Company, a corporation, not as two distinct legal entities, which for some purposes would have been quite proper, but rather looked upon the individual and the corporation as a single legal unit. The interests of the Water Works Company and Starr were so intermingled and inseparable as to constitute one economic entity.

Analysis of these and other cases of a similar nature have prompted some to urge explicit recognition of the economic nature of the business enterprise rather than its legal form.

In its financial power and in its unified direction and control, the corporation plays a significant role in modern economic life. It is thus absurd to consider the corporation as an individual. If the corporation is to be personified at all, it appears that it should be personified as an economic unit. It may be even termed an "economic" person.[45]

And

A legal entity differs from an economic entity.

[39] *In re Pittsburgh Railways Company*, 155 Fed (2d), 482 (1946).
[40] *Ibid.*, p. 485.
[41] Maurice J. Dix, "The Economic Entity," *Fordham Law Review*, XXII (December, 1953), 264.

[42] *Wood v. Guarantee Trust and Safe Deposit Company*, 128 US 424 (1888).
[43] *Ibid.*, pp. 424–425.
[44] *Ibid.*, p. 425.
[45] Joseph Wise, "Due Process: Corporation as an Economic Unit," *University of Cincinnati Law Review*, XIII (May, 1939), 467.

The economic entity does not have any corporate charter. It is an economic choice of management. It ties in legal entities for operation in a common endeavor or enterprise. The idea behind an economic entity is joinder or merger of activity—unity of life—in the goal of the common undertaking or enterprise. In an economic entity, each legal entity has dedicated itself and its property to the success of the common undertaking.[46]

. . . .

Combined or coordinated operations—in whole or in part—of the business or activities of a group of corporations, clearly results in a unity of life in the common endeavor. It is an economic arrangement of activity defining the function to be performed by each participant in the enterprise. It rests on the facts of economic life and not on the form of separate legal entity. It carries out the intended economic arrangement of the enterprise. Those who deal with the economic entity as such should not be required to examine the details of the legal structure.[47]

As an indication of the increasing significance of the concept of economic entity, remarks of other well-known authors in the field of corporation law and finance may be noted. Berle calls attention to the fact that "the divergence between corporate theory and the underlying economic facts has occasioned a variety of problems (dealt with *ad hoc* by the courts) in which the theory of 'artificial personality' simply did not work, and was consequently extended, disregarded, sometimes buttressed by further fiction, at others manipulated to get a convenient result."[48] He suggests that a number of rules, ordinarily regarded as separate, are, in fact, applications of a single dominant principle. It is his contention "that the entity commomly known as 'corporate entity' takes its being from the reality of the underlying enterprise, formed or in formation; that the state's approval of the corporate form sets up a prima facie case that the assets, liabilities and operations of the corporation are those of the enterprise; but that where the corporate entity is defective, or otherwise challenged, its existence, extent and consequences may be determined by the actual existence and extent and operations of the underlying enterprise, which by these very qualities acquires an entity of its own, recognized by law."[49]

Dewing also considers the "true conception" of the corporation to be one which emphasizes its economic nature rather than its legal nature:

The legal attributes of the corporation are mere accidents of historical development; they do not describe the corporation as we understand it, nor do they give us any clue to its social and economic significance in our modern industrial society. . . . The corporation is an institution and its reality lies not in legalistic definitions but in the part the corporation plays in the complex balance of forces that constitutes the economic world of the present time. What we are interested in, if we try to define a corporation, is its functions as an institution—and a very important and significant institution—in our contemporary economic life.[50]

CONCLUSIONS

It has been said that legal precedent may be found to support all sides of a legal controversy. Clearly views with respect to the nature of the corporation are no exception. This has interesting implications for accounting theory.

The proprietary theory of accounting requires that the corporation be viewed as an association of individual owners; the entity theory of accounting is based upon the notion that the existence of the corporation is quite separate and distinct from the stockholders. These two concepts of the corporation are diametrically opposed, yet, each has found clear support in the law. Also, the fund theory of accounting[51]

[46] Dix, *op. cit.*, p. 255.
[47] *Ibid.*, p. 264.
[48] Berle, *op. cit.*, p. 344.
[49] *Ibid.*, p. 344.
[50] Arthur Stone Dewing, *The Financial Policy of Corporations* (5th ed.; New York: The Ronald Press Company 1953) I. 16–17.
[51] William J. Vatter, *The Fund Theory of Accounting and Its Implications for Financial Reports* (Chicago: The University of Chicago Press, 1947).

and the enterprise theory of accounting[52] are at least consistent with the concept of the corporation as representing merely a particular set of legal relations and the concept of economic entity, respectively.

Contrary to what seems to be popular belief, reference to the experience of law is not apt to facilitate the evaluation of accounting proposals the foundation for which rests upon a particular concept of the corporation. Proponents of such proposals must be prepared to support their position on the basis of something other than legal precedent.

[52] Waino W. Suojanen, "Accounting Theory and the Large Corporation," THE ACCOUNTING REVIEW, XXIX (July, 1954).

PRODUCTION WASTE—ITS NATURE AND ITS ACCOUNTING*

Harold E. Paddock

The existence of waste in modern industry became of widespread interest during World War I when the War Industries Board brought the poor utilization of our natural resources, labor, and machines to the attention of industrial leaders and the public. The production of war supplies was impeded because of such problems as the great diversity of production methods, many minor variations in finished goods in the same industry, and inefficient utilization of economic resources, materials, labor and machinery. The Board made some progress in reducing industrial waste by the introduction of standardized products, and recommendations for the standardization of production methods. The short duration of the United States participation in World War I, however, prevented the work of the Board from being more than a beginning toward the reduction of waste in industry.

After World War I many industrial leaders in the United States recognized that the work done by the War Industries Board was only a preliminary step toward the prevention and elimination of industrial waste. Former President Herbert C. Hoover was one of the industrial leaders who realized that more work should be done to reduce industrial waste. He instigated two forms of action to increase industrial recognition of waste and methods of eliminating it. In 1920 he was instrumental in the establishment of the Federated American Engineering Societies, and was elected its first president. As a result of his interest, one of the points of the program submitted by him to the executive committee was a study of waste in industry. The adoption of his recommendation resulted in the publication in 1921 of detailed reports of waste in six industries.[1]

In 1921 Herbert C. Hoover became Secretary of Commerce of the United States. One of his first actions was to establish a group within the Bureau of Standards to work with industry in the elimination of waste through such means as the development of simplified practices. The Bureau of Standards published several papers on simplified practices during the twenties.

Evidently the problems of waste in industry were basically the same at the time of World War II as those found during and after World War I. Although the terminology is changed somewhat, the Engineering Society's list of sources and causes of waste are practically the same as those enumerated some twenty years later by William R. Spriegel and Edward Schulz[2] in their discussion of the relationship of supervision and waste in industry. These authors say,

> Industrial waste in the broadest social and economic sense includes:
>
> 1. Unemployment during depressions,
> 2. Speculation and overproduction during boom times,
> 3. Excessive labor turnover,
> 4. Labor conflicts,
> 5. Failure in transportation of supplies, fuel, or power,
> 6. Unbalanced seasonal production,
> 7. Lack of standardization,
> 8. Inefficient processing of materials,
> 9. Uneconomic use of equipment,
> 10. Inefficient use of manpower,
> 11. Uneconomic use of supplies,

* Developed from the author's unpublished doctoral dissertation, University of Texas, 1955.

[1] Federated American Engineering Societies, *Waste in Industry*, McGraw-Hill Book Company, New York, 1921.

[2] W. R. Spriegel and Edward Schulz, *Elements of Supervision*, John Wiley & Sons, New York, 1942.

12. Misuse of power,
13. Deliberate restriction of production either by management or men, and
14. Ill health and accidents.

The listed sources of waste all affect production directly or indirectly, but some are more of a social and economic problem than a production problem. Several of the causes, such as unemployment during depressions, speculation and overproduction during boom times, labor conflicts, and deliberate restriction of production, are external in the sense that they are beyond the control of any one company or are so widespread that the federal and state governments have taken legislative action to deal with them.

The internal causes of waste in a company such as excessive labor turnover and ill health and accidents are ordinarily handled through a personnel department. Data about these losses would be included in personnel statistics for labor turnover, sickness, and accidents. Reports of waste arising from other internal causes are generally the responsibility of accounting. This group includes losses from unbalanced seasonal production, lack of standardization, inefficient processing of materials, uneconomic use of equipment, inefficient use of manpower, and uneconomic use of supplies. The type of waste to be considered here will be that resulting from internal causes which the accountant is normally responsible for reporting.

DEFINITION OF PRODUCTION WASTE

Having eliminated many of the sources and causes of industrial waste from the scope of this article, it is desirable that a definition of waste be considered before proceeding further. Kohler defines waste as

> resources of labor or material consumed or produced in a given operation and not returning an economic benefit.[3]

[3] Eric L. Kohler, *A Dictionary for Accountants*, Prentice-Hall, New York, 1952.

A definition of waste, which would seem to be the most useful in the prevention, control, and elimination of production waste, would be

> the resources of labor, material, and machine time consumed or material produced in a given operation which do not return an economic benefit.

This definition includes losses of machine and equipment time in addition to the factors mentioned by Kohler. Many firms think of waste only in terms of material without regard for the other costs that may be involved. This consideration prevents recognition of the importance of the waste and may lead to erroneous conclusions. Research aimed at the reduction or elimination of waste could be misguided by lack of consideration of all of the cost elements—material, labor, and burden.

The above definition includes waste from all production sources. A further refinement is necessary for it to be useful to the accountant. Causes of waste should be segregated into two groups, (1) avoidable and (2) unavoidable. The first type is called avoidable or controllable because it is considered to be within the control of the people directly involved in the manufacture of the product. The second type is termed unavoidable or uncontrollable since this waste is inherent in the product, the production process, or the raw materials.

Unavoidable Waste

Production personnel should not be charged with the control and elimination of manufacturing waste which results from the type of raw materials used, the product design or the manufacturing methods used. The products that a company manufactures, the methods used to produce the products, and the types of raw materials put into the product are all beyond the control of production personnel. These factors are a result of management decisions. Any changes that are contemplated have

to be approved by the management before they can be put in effect. If there are no changes, the management reaffirms its decisions by such actions as approving the purchases budget, the sales budget, and the capital expenditures budget each year.

Management must know that unavoidable waste exists and how important it is in relation to production costs before it can make the correct decisions. If this unavoidable waste is not segregated from avoidable waste, management is likely to look to Production to eliminate the total. The segregation brings to management's attention the fact that waste is taking place for which it alone is responsible. Unavoidable waste can be reduced or eliminated only through policy decisions that will alter the product, method or material.

The need for reduction in unavoidable waste may be pointed out in cost reports, but the accomplishment of such reduction will result from research. The value of separate unavoidable waste information is that it not only shows the existence of the waste, but also indicates the areas where the research is needed.

Avoidable Waste

The second general source, avoidable waste, has also been termed controllable because it is due to human error. Such causes as carelessness, faulty material handling, and faulty use of machines are sources of avoidable waste. Each of these causes is within the control of production supervision, and the management correctly expects the production personnel to control them. The reporting of avoidable waste separately permits management to judge how effective a job the production personnel is doing in controlling waste.

THE ACCOUNTANT AND WASTE

Waste is one of the areas of business operations where the accountant can furnish management with useful information. Waste reports can indicate to management whether there are any waste problems. The separate reporting of avoidable and unavoidable waste shows the area in which action is needed. In order to prepare such reports, the accountant needs the cooperation of staff and production personnel. A designation of what is waste and what is the source of the waste must be made by staff technicians. With a knowledge of the production process and the quality requirements of the product, the technicians should designate the material that will become unavoidable waste and should set up a means of collecting and measuring the amounts. The accountant's job is to bring together the amounts reported by the production department and data from the cost records.

Losses of product through avoidable waste are usually discovered by inspection. The inspectors eliminate the substandard product from further processing. Inspection departments are thus the logical places for the collection and reporting of the quantities of defective product arising in production. In certain situations, machine operators discover the production of defective product. The method of collecting the data concerning the amount of product lost from avoidable waste must be adapted to this situation if the accountant is to have a complete report of waste.

EXTENT OF WASTE PROGRAM

Cost Limitation

For many companies an extensive waste-reporting program would cost more than the potential savings. Other companies have found that the cost of unavoidable waste is so high that extensive research is needed to reduce the amount of this waste. Where the potential for defective products of high value is great, companies have

found it advantageous to establish a special staff department for the prevention, control, and elimination of avoidable waste.

Follow-up by Management and Production Personnel Required

Waste reports will have no value unless management and production personnel are willing to take action upon the reported waste. Any reduction, control, or elimination of waste must take place through activities of the management and production people.

ACCOUNTING REQUIREMENT OF MATCHING COST WITH REVENUE

One of the primary functions of accounting is to provide data which can be used to prepare financial statements. These statements are based in part upon matching costs with related revenues. The determination of the income for any period is dependent upon the association of the costs incurred in producing and marketing the products with the resulting revenue of the period. The costs that have been incurred but are related to future revenues are incorporated in the balance sheet as inventories, prepaid expenses, and deferred charges.

Unavoidable waste is one of the costs which should be related to present and future revenues for an accurate statement of income, and of assets. The cost of the waste resulting from the production of the products sold during the period should be a charge against the revenue of the period. The cost of the waste arising from the production of the goods held in the inventories should be included in the inventory cost shown in the balance sheet. The method of allocating the cost of unavoidable waste between cost of sales and inventories depends, in each case, on the particular circumstances.

Avoidable waste does not contribute to the manufacture of the products sold during a period or to the products that will be sold in the future. This type of waste does the opposite as it uses materials, labor, and machine time that would otherwise be used for salable product. Since avoidable waste detracts from output, its cost is not related to the revenue of the period in which it occurs. This cost does not add anything to the assets and therefore should not be included in the cost of the inventories. Avoidable waste arising from faulty operations during the period is a loss not related to any product, and should be charged directly to the income of the period in which the waste occurred.

WASTE REPORTS

Waste reports should help management in performing its functions of planning, coordination, and control. Waste estimates, by showing the expected amount of waste arising from different production methods, should aid in the choice of a production method. The cost of waste should be included as a consideration in product price determination. With the waste reports as a guide, management is able to direct its attention to the specific points where waste is a problem and thus concentrate its efforts on the trouble.

Avoidable waste is within the control of production personnel. Waste of this type should be included in reports to management which indicate production efficiency. Since the causes of the avoidable and unavoidable waste costs are different, they should be shown separately in reports. Exhibit 1 gives an example of a management waste report. The upper section on unavoidable waste shows the effect of the policies of management. The lower section on avoidable waste indicates the effectiveness of the production personnel in controlling waste. Exhibit 2 is a more detailed report for production personnel. This report is limited to avoidable wastes.

Exhibit 1

ABC MANUFACTURING COMPANY
WASTE REPORT
January, 19—

UNCONTROLLABLE WASTE

	Department M		Total Company	
	Waste Cost	*% of Total Dep't Cost*	*Waste Cost*	*% of Total Cost*
Products				
W				
X				
Y				
Z				
Total				

CONTROLLABLE WASTE

	Department M		Total Company	
	Waste Cost	*% of Total Dep't Cost*	*Waste Cost*	*% of Total Cost*
Products				
W				
X				
Y				
Z				
Total				

Exhibit 2

DEPARTMENT M
WASTE REPORT
WEEK ENDING JANUARY 20, 19—

	Product W Waste		Total Product Waste	
	Quantity	*Cost*	*Quantity*	*Cost*
Production Step 1				
Waste Cause D				
Waste Cause E				
Waste Cause F				
Waste Cause G				
Total				
Production Step 2				
Total Department M				
Budget				
Variance from Budget				

If waste reports are to be an effective tool for management and production supervision, the cost accounting system must be established according to areas of responsibility. Management must know which department is not performing fully before it can take action on controllable waste and production supervision must know where to look to correct the causes of this waste. The management guidance of research toward the elimination of waste is also dependent upon an indication of the points at which unavoidable waste occurs before efforts can be initiated to eliminate the waste.

Waste should be accounted for in each of the production steps. With the indication of the location of waste, the depart-

ment supervision will be able to go directly to the person responsible for an explanation and correction in the case of avoidable waste. If the waste is unavoidable, the management will be in a position to consider the possibilities of a change in the production process or to indicate to the research staff where it should investigate a change in the production process.

The division of waste into the two general sources is really only the first step toward identifying the causes of waste. Further information is necessary to specify the exact cause of the waste. Accounting procedures for unavoidable waste do a better job of narrowing down the sources of waste than do the procedures for avoidable waste. By accounting for uncontrollable waste as it occurs in each production step, management can compare costs of each process and in total, and determine the relative importance of the unavoidable waste from each step.

Although there are many more causes of avoidable than of unavoidable waste, the typical accounting procedure for avoidable waste tends to lump all losses into one figure. Accounting should recognize the importance of avoidable waste data to management and make a special effort to relate costs to causes.

The technical knowledge required to control and eliminate avoidable waste in a company may result in the establishment of a specialized staff group which reports on waste data to management and production personnel. However, accounting is still responsible for the accuracy of these data and the accounting for and reporting of the cost of avoidable waste.

SUMMARY

The waste accounting system for a company should separate avoidable waste from unavoidable waste costs, relate the units and cost of avoidable waste with its causes, allocate unavoidable waste costs to the current period and to future periods, and provide the data necessary for reports on waste costs for management.

ENTERPRISE THEORY AND CORPORATE BALANCE SHEETS*

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SINCE the end of the first World War, a number of observers have commented on the fact that large corporations are obtaining an increasing percentage of their capital requirements from internal sources. This is frequently paralleled by the observation that as corporations grow in size, their behavior tends to become institutionalized. The remarks of a noted British economist on these tendencies are especially significant.

> A point arrives in the growth of a big institution . . . at which the owners of the capital, *i.e.* the shareholders, are almost entirely dissociated from the management, with the result that the direct personal interest of the latter in the making of great profit becomes quite secondary. When this stage is reached, the general stability and reputation of the institutions are more considered by the management than the maximum of profit for the shareholders. The shareholders must be satisfied by conventionally adequate dividends, but once this is secured, the direct interest of the management often consists in avoiding criticism from the public and from the customers of the concern. This is particularly true if their great size or semi-monopolistic position renders them conspicuous in the public eye and vulnerable to public attack.[1]

A pioneer exponent of enterprise theory, and one who is familiar with the workings of the American business community, is very much in agreement with the above. He writes as follows:

> Because management is concerned with the enterprise as a whole, the welfare of any component must be sacrificed when necessary. The easiest to sacrifice is the stockholder. Some portion of the return to capital is, however, regarded in the same category as the other expenses of the enterprise. . . . As a claimant to income, the stockholder is in an uncomfortable position. He may no longer with accuracy be regarded as the residuary owner, for the surplus ordinarily reverts to the enterprise as a whole.[2]

Once "conventionally adequate dividends" have been secured for the stockholders of the enterprise, its management has surplus funds available which can be used for other purposes. The main sources of these excess funds are retained earnings and depletion and depreciation allowances. Given such internal sources of funds, the firm is to a considerable extent freed from the securities markets for fixed capital requirements and from dependence on the commercial banks for working capital needs.[3]

* Research on this paper was almost finished when Professor Harold G. Avery's article, "The Relative Importance of Fixed Assets," appeared in the July, 1956 issue of THE ACCOUNTING REVIEW, pp. 435–438. It is interesting to note the close agreement between Table 2 of this paper and Table I of Professor Avery's article. I have attempted to explain some of the questions that Professor Avery raises in the summary of his paper but many others are still not clear. This area constitutes an extremely fertile field of accounting research of which only a small portion has been explored.

I am indebted to my colleagues, Professor William L. Crum and Robert T. Sprouse for their comments and criticism. However, unless otherwise indicated, the opinions expressed are my own.

[1] John Maynard Keynes, *Essays in Persuasion*, (New York: Harcourt, Brace and Co., 1932), pp. 314–315.

[2] Oswald Knauth, ***Managerial Enterprise: Its Growth and Methods of Operation***, (New York: W. W. Norton and Co., Inc., 1948), p. 159.

[3] The trend toward "industrial banking" has accelerated since the end of World War II. For instance, Standard Oil of New Jersey ". . . acts as lender and financial adviser to its affiliates. The company is an outstanding if not the best example of what is known as self-capitalization. It is in some ways just a great big bank. With its help, the affiliates have financed the greater part of their expansion out of earnings."; "The Jersey Company," *Fortune* October, 1951, p. 176. Ford Motor Company has had a similar policy; "E. R. Breech, Ford Chairman, said funds for the expansion programs have been and will be financed from earnings, depreciation accruals and 'more efficient handling of working capital turnover'."; "Business Milestones," *The Wall Street Journal*, October 7, 1955, p. 10. General Electric " . . . in recent years has financed its expansion out of current income" and "this is the first time since December, 1946, that GE has had to borrow money for

This study is concerned with following through on observations such as the above and the following comment that:

> The separation within the group of functions of management from those of ownership, and the concentration of the former in a few hands, have resulted in fact in a large share of profits being retained in the business; the "owners" have little opportunity to dispose of these profits as they would if the profit were all distributed in dividends; 29.4 per cent of their net income was retained within the larger corporation during the period 1922 to 1927. This retention may be intended to avoid shortages of liquid resources in periods of restricted business or to permit the continued payment of dividends in the absence of adequate current profits. But it also facilitates expansion without the necessity of issuing new securities; those managers who find size attractive can satisfy their desire without having to submit their plans to the test of the capital market.[4]

Knauth makes a further point that the institutionalization of the corporation has resulted in significant changes in financing.

> The continuity of operation in managerial enterprise has its counterpart in continuity of financing. When operations never stop, loans are seldom made for a specific purpose. Fixed-term obligations, especially of large amounts, may be an embarrassment if they happen to fall due at a date that may be an inauspicious time for paying them off or for refinancing. Loans that can be paid off piecemeal out of income are desirable. Even better are preferred shares of stock having no due date, yet redeemable at a predesignated price.
>
> Likewise, continuity of operations has diminished the importance of short-term self-liquidating bank loans and commercial paper. The role of loans in industry has been reduced to meeting the cash needs of seasonal variations of demand or production. So small has this requirement become that banks have been forced to look elsewhere for short-term paper to ensure their liquidity.[5]

The above comments raise a number of hypotheses, some of which will be explored further in this paper. The writer has previously discussed certain aspects of the institutionalization of the large corporation.[6] In that study, it was indicated that the management of the large enterprise becomes the custodian of the organizational objectives of survival and growth. In order to strengthen the survival of the firm, its management recognizes that internal sources of funds are preferable to external sources. Similarly, if the corporation is to grow, investment opportunities must be deliberately created and continuously available.

The policy of paying only "conventionally adequate dividends" ties in with the survival and growth objectives. Retention of earnings increases the "number of eggs in the basket" during years when earnings are high. These accumulated funds can then be used to pay dividends in periods of low profits.[7] If this is a generally followed policy, then, over time, the ratio of surplus and related accounts to total balance sheet credits would tend to increase, at least during periods of high profits. At the same time, the ratio of

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any purpose."; "GE Bank Loan of $100 Million to Pay its Taxes," *The Wall Street Journal*, March 16, 1956, p. 3. The above comments are illustrative. A study of annual reports of listed companies tends to confirm that many large corporations have similar policies.

[4] Arthur R. Burns, *The Decline of Competition*, (New York: McGraw-Hill Book Co., Inc., 1936), p. 10. An interesting sidelight on Burns' position regarding the continuance of dividend payments is the position of the American Telephone and Telegraph Co. At its 1956 annual meeting, the president of that company stated that "... A.T.&T. now has retained earnings of $19.99 a share, which, he added is only enough to protect the company's dividend for two years and two months, compared with retained earnings for electric utilities high enough to protect dividends for three and a half years and manufacturing concerns like General Motors and General Electric whose retained earnings are enough to cover their dividends for seven and a half years.

"'Our retained earnings must be built up,' Mr. Craig said. 'You must have enough eggs left over in your basket so you hatch chickens who will lay more eggs. You'll never better your position if you take the eggs out and eat them.'" "AT&T to Spend Record $2.1 Billion on Expansion in '56," *The Wall Street Journal*, April 19, 1956, p. 4.

[5] *Ibid.*, pp. 65–66.

[6] "Accounting Theory and the Large Corporation," The Accounting Review, July, 1954, 391–398.

[7] The chairman of the board of a large steel company recently stated that he believes "... stockholders in corporations are entitled to a fair return on investments, and that 50% of income should be paid to shareholders." "National Steel's Chairman Urges Industry to Raise Prices Without Waiting To Be Led by U. S. Steel," *The Wall Street Journal*, March 23, 1956, p. 2.

common stock items to total equities would tend to follow a pattern contrary to that of retained earnings.

In the same vein, if the above holds true, there should be a close relationship between self financing, or industrial banking, and postwar expansion-merger-diversification movement. If only about half of income is distributed as dividends and depreciation provides additional funds, then corporate managements must search diligently and continuously for investment opportunities in which to place these internally generated cash resources. Although expansionary funds are necessary, an inordinately high balance of cash and marketable securities appears undesirable. Funds that appear excessive in amount may provoke the stockholders to demand higher dividends or may invite forays by entrepreneurial "raiders."

If, however, the corporation has a higher rate of return on equity than is available to the stockholder on investment opportunities determined by him individually, there may be mutterings about the inadequacy of dividend payments but no outright rebellion because of the potential capital gains that are created by a "plowback" policy. A prudent and well planned expansion-merger-diversification policy looks in this direction and seeks to equal or better the existing rate of return. It is a reasonable argument that larger companies do better as far as this measure is concerned than do the smaller firms.

As management practices improve, it appears reasonable to assume that while the ratio of cash to total assets may increase, the ratio of other current assets to total assets will decrease. Higher cash balances are needed so that the corporation can act rapidly to acquire a smaller firm or move into the production of new products developed in the course of the research program. Another factor predisposing to higher cash balances is the increased importance of having funds available to pay income tax and payroll tax liabilities. By the same token, better collection policies would tend to reduce accounts receivable balances and improved inventory control practices would act to decrease the inventory-asset ratio.

The Trend Toward Self Financing

The literature indicates that large corporations have increased their degree of financial independence in recent years. During the period from January 1, 1940 to June 30, 1952, "new funds came to a major extent, nearly 60 per cent, from building up the net assets—principally by the retention of earnings. New stock issues sold to investors provided only 3 per cent of the total funds needed."[8] Additional data on the importance of retained earnings in the financing requirements of large corporations has been gathered by the Federal Reserve Board. "With the exception of a brief period of transition from military to civilian goods production at the end of World War II and a moderate inventory adjustment in 1949, the period 1939–52 has been one of almost continuous growth in the volume of large company funds from operations."[9] In the period of time that has elapsed since June 30, 1952, the above has continued to hold true "these two sources—retained earnings and depreciation—were equivalent to two-thirds of the total funds utilized in the last two years, a slightly larger proportion than in

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[8] *The National City Bank of New York News Letter*, "Industrial Expansion and Working Capital," December, 1952, p. 143.

[9] Paul S. Anderson, "Wartime and Postwar Credit Demands of Large Corporations," *Federal Reserve Bulletin*, July, 1953, p. 711. See also, Paul S. Anderson, "Financing of Large Corporations in 1951," *ibid.*, June, 1952, pp. 638–643; Eleanor J. Stockwell, "Financing of Large Corporations in 1950," *ibid.*, August, 1951, pp. 913–919; Eleanor J. Stockwell, "Industrial Differences in Large Corporation Financing in 1949," *ibid.*, June, 1950, pp. 636–642; Charles H. Schmidt, "Industrial Differences in Large Corporation Financing in 1948," *ibid.*, June, 1949, pp. 626–633.

the preceding years of the postwar period."[10]

The data further show that not only has there been a drawing away of large corporations from the banking system but that there has also been more effective employment of funds by large companies in recent years.

For the large corporations as a group, moreover, there is evidence of both a more efficient utilization of liquid assets and a trend toward keeping excess working funds more fully invested in United States Government securities. The ratio of cash holdings to sales has declined steadily, from 13 per cent in 1938 to 6 per cent in 1952, and the proportion of total liquid assets held in cash from 80 per cent to 45 per cent. . . . Inventory holdings, although substantially larger in dollar amount now, than before the war, have been smaller in relation to sales in each of the past few years than in the immediate prewar period. In part this reflects the adoption by many companies of the last-in-first-out (LIFO) method of accounting for inventories. Other causal factors, however, include more conservative buying practices and improved inventory control. These in turn have helped to limit large company requirements for additional working capital, and to that extent have lessened their demands on the credit market.[11]

Size Differences

Table 1 has been prepared in order to permit comparisons to be made of the ratios of various assets to total assets, and of various liabilities to total liabilities, for corporations in the various asset classes indicated. This computation has been made only for the year 1950 and therefore inter-temporal comparisons cannot be made. It is designed, rather, to show the changes that occur in the constituent accounts of industrial corporation balance sheets as the size of companies increases and to develop further data on self financing.

Table 1 supports the conclusions above that as the size of the corporation increases the ratio of cash and accounts and notes receivable relative to total assets declines. In the case of the smallest corporation, (the $0-49,999 asset class), these three types of assets were 34.6 per cent of total assets, whereas in the largest size class they comprised only 20.4 per cent of total assets. This indicates that larger industrial corporations do a better job of managing their liquid assets than do smaller firms. The ratio of inventories to total assets, on the other hand, increased until the $500,000-$999,999 asset class was reached, and decreased with increasing size from that position with the largest relative reduction in the largest size class. Net capital assets showed a pattern just the opposite of inventories; the ratio was high for the smallest size class, declined until the $500,000-$999,999 size class was reached, and then increased to the largest size class.

The ratio of investments to total assets increased consistently with increasing size, indicating that as corporations grow in size the proportion of investments to assets becomes larger. Of their total assets, the largest corporations held 24.5 per cent in investments in 1950 while the smallest corporations held only 3.3 per cent in investments. Here again, the largest relative increase in the ratio of investments to total assets occurred in the largest companies. The relationship of increased investments to the survival and growth hypothesis is obvious.

The credit sides of the balance sheets presented in Table 1 also tend to support the self financing hypothesis. Accounts and notes payable accounted for 33.2 per cent of the liabilities in the smallest corporations and decreased through all size classifications to 10.0 per cent for the

[10] Loughlin F. McHugh, "Financing Corporate Business," *Survey of Current Business*, April, 1954, p. 14. See also, Loughlin F. McHugh and Leonard G. Rosenberg, "Financial Experience of Large and Medium Size Manufacturing Firms, 1927–51," *ibid.*, November, 1952; *Federal Reserve Bulletin*, "Financing of Large Corporations in 1953," August, 1954, pp. 812–820.

[11] Paul S. Anderson, "Wartime and Postwar Credit Demands of Large Corporations," *loc. cit.*, p. 712.

TABLE 1

RELATIVE CHANGES IN BALANCE SHEET ACCOUNTS—1950

	Asset Class $0–$49,999 Per Cent of Total	Asset Class $50,000–$99,999 Per Cent of Total	Asset Class $100,000–$249,999 Per Cent of Total	Asset Class $250,000–$499,999 Per Cent of Total	Asset Class $500,000–$999,999 Per Cent of Total	Asset Class $1,000,000–$4,999,999 Per Cent of Total	Asset Class $5,000,000–$9,999,999 Per Cent of Total	Asset Class $10,000,000–$49,999,999 Per Cent of Total	Asset Class $50,000,000–$99,999,999 Per Cent of Total	Over $100,000,000	Average—all Industrial Corporation
Assets											
Cash	11.4	10.9	10.5	10.6	10.9	11.0	10.1	10.7	9.9	8.0	9.4
Accounts and notes receivable, net	23.2	23.0	22.5	21.3	20.2	18.8	17.1	16.3	14.9	12.4	15.4
Inventories	22.2	25.0	27.3	28.6	29.2	28.7	28.0	25.9	24.5	18.7	23.3
Investments	3.3	3.8	4.8	6.2	7.6	10.1	12.1	13.6	16.9	24.5	17.3
Capital assets, net	35.3	33.6	31.7	30.4	29.4	29.4	30.6	31.5	31.7	35.2	32.8
Equities											
Accounts and notes payable	33.2	26.2	23.4	20.8	18.6	15.5	12.6	11.0	11.0	10.0	12.4
Bonds and mortgages payable	13.4	10.8	9.4	8.3	7.3	6.3	6.5	8.2	9.7	9.6	8.7
Capital stock	54.7	37.8	31.2	27.4	24.5	22.1	20.9	21.3	23.6	27.1	25.1
Surplus and undivided profits less deficit	12.6	16.5	27.3	34.0	39.4	45.6	49.8	48.8	45.1	42.8	43.5
Rate of income or deficit on all equities	(2.9)	5.3	8.6	11.5	13.8	16.0	17.1	17.8	18.0	17.7	16.7

Source: See Appendix (totals do not add to 100 per cent because original data list only *selected* assets and liabilities).

largest companies. That smaller firms have to rely much more heavily on trade credit is a well known fact. The smaller companies also had lower inventory-asset ratios than the larger ones. This is logical in view of the fact that the management of a smaller company has a very difficult task of allocating insufficient funds to a number of equally urgent ends and therefore has to devote a greater amount of time to surmounting pressing financial problems than does the management of a large company.

Bonds and mortgages payable accounted for 13.4 per cent of the equities of the smallest corporations, declined until the $1,000,000-$4,999,999 size class was attained, and increased past that point. Smaller firms find it more difficult to obtain debt financing and are motivated by the danger of incurring excessive interest charges that may become a threat to survival even during relatively minor recessions. In contrast to this, fixed interest charges, while they may be large in absolute amount, are only a small relative fraction of total cash needs of larger companies and hence do not present the danger that they do in smaller firms. Table 1 indicates that the rate of return on equity in corporations in the larger size classes is 16 per cent or more. Since larger firms can borrow long-term capital at substantially lower rates than this, they are in a position to tap the capital markets whenever profit expectations are such that trading on the equity appears advantageous.

The ratio of capital stock to equities amounted to 54.7 per cent in the smallest size class, declined to 20.9 per cent in the $5,000,000-$9,999,999 asset group, and rose appreciably to 27.1 per cent in the largest corporations. The contrast of the large firms to the small ones would be even more marked if earned surplus since inception were reported in the data rather than

TABLE 2

BALANCE SHEET RATIOS FOR SELECTED YEARS, 1937–1952

	Per cent of Total Assets, by Years									
	1937	*1939*	*1941*	*1946*	*1947*	*1948*	*1949*	*1950*	*1951*	*1952*
Assets										
Cash	5.9	8.1	8.8	11.4	10.7	9.7	10.2	9.4	9.0	8.7
Notes and accounts receivable	12.6	13.1	15.5	14.0	14.5	14.0	13.0	15.4	14.9	15.8
Inventories	20.6	19.4	23.1	24.2	24.8	24.9	22.4	23.3	25.3	24.5
Investments, government obligations	2.1	2.0	3.6	7.4	6.3	6.2	7.6	8.6	7.9	7.0
Other investments	15.0	15.0	11.8	9.8	9.6	9.2	9.2	8.7	8.2	8.2
Net capital assets (except land)	38.6	40.6	32.4	28.6	29.9	32.2	33.9	31.2	31.4	32.6
Land	—	—	2.9	2.0	1.8	1.7	1.7	1.5	1.4	1.3
Other assets:	5.2	2.1	2.0	2.6	2.3	2.1	1.9	1.8	1.8	1.9
Total assets	100.0	100.3	100.1	100.0	99.9	100.0	99.9	99.9	99.9	100.0
	Per cent of Total Liabilities, by Years									
	1937	*1939*	*1941*	*1946*	*1947*	*1948*	*1949*	*1950*	*1951*	*1952*
Equities										
Accounts payable	8.4	8.5	9.1	9.5	9.8	9.4	8.2	9.2	9.1	9.5
Bonds, notes, mortgages payable (maturity less than one year)	4.7	3.9	4.0	3.6	3.4	3.2	2.5	3.2	3.8	3.9
Bonds, notes, mortgages payable (Maturity more than one year)	8.8	9.3	8.1	8.2	8.9	9.7	9.9	8.7	9.8	11.4
Other liabilities	4.1	3.6	9.7	8.5	9.0	8.7	7.5	10.4	12.1	10.9
Capital stock, preferred	10.2	10.0	7.9	6.5	6.1	5.6	5.6	4.7	4.3	4.0
Capital stock, common	36.4	35.3	28.5	24.6	23.2	22.0	22.5	20.4	19.2	18.7
Surplus, surplus reserves and undivided	27.4	29.5	32.8	39.1	39.5	41.5	43.6	43.4	41.7	41.6
Total liabilities	100.0	100.0	101.1	100.0	99.9	100.0	99.8	100.0	100.0	100.0

Source: See Appendix (Totals do not add to 100 per cent due to rounding).

the division of equities for a given balance sheet date. In other words, large corporations tend to employ stock dividends to a greater extent than do small ones and we have no way of knowing just what part of the common stock that appears in the aggregate data really represents formal capitalization of retained earnings, although we know that it is quite significant.

The sharpest reduction in the common stock-equity ratio occurred between the first two size classes; the spread between firms in the $100,000-$249,999 class and the largest class was only 4.1 per cent whereas the difference between this class and the smallest class was 23.5 per cent. This, along with the fact that all size classes with the exception of the smallest had positive earnings, indicates that small size need not be a bar to profits. It also appears that a degree of financial independence can take place while a company is still relatively small.

Retained earnings accounted for 12.6 per cent of equities in the smallest group, rose rapidly to 49.8 per cent in the $5,000,000-$9,999,999 asset class and then declined to 42.8 per cent in the largest companies. Again, it was the smallest firms that had, not only the lowest ratio of retained earnings to equity, but also the lowest rate of profit on equity. When a firm has assets over $1,000,000, its operations are almost as profitable as those of larger firms and it is well on the way to becoming a self financing institution. Beyond this point, management has considerable leeway in determining the distribution of net profits. The rate of return on equity is high enough in most large corporations so that they can grow at a planned rate and pay cash dividends without having to resort to outside sources of capital except in special cases.

Balance Sheet Changes Over Time

In Table 2, the *Statistics of Income* data for three prewar years and five postwar years are presented in relative form. For each year, each asset and liability (equity) account has been shown as a percentage

TABLE 3

BALANCE SHEET RATIOS FOR SELECTED YEARS, 1937–1952*

	1937	*1939*	*1941*	*1946*	*1947*	*1948*	*1949*	*1950*	*1951*	*1952*
Assets										
Cash	100	139	187	336	362	359	384	407	443	449
Notes and accounts receivable less reserves	100	106	155	193	230	244	229	311	343	384
Inventories	100	96	141	203	241	265	243	288	356	365
Investments, government obligations	100	101	222	626	617	659	824	1066	1114	1038
Other investments	100	102	98	112	128	133	135	147	158	168
Gross capital assets (except land) less reserves	100	108	116	141	171	201	215	227	258	284
Land	—	—	—	100	95	102	105	106	111	109
Other assets	100	40	47	85	87	88	82	88	99	109
Total Assets	100	102	126	173	200	218	222	254	289	307
Equities										
Accounts payable	100	103	136	196	233	244	217	277	313	347
Bonds, notes, mortgages payable:										
(Maturity less than one year)	100	84	107	135	148	148	120	177	237	253
(Maturity 1 year or more)	100	107	116	161	202	240	250	250	322	395
Other liabilities	100	89	295	354	434	460	404	638	846	807
Capital stock, preferred	100	100	98	111	120	119	122	116	121	113
Capital stock, common	100	99	98	117	127	132	137	142	152	157
Surplus reserves	—	100	186	262	290	298	277	295	318	296
Surplus and undivided profits less deficit	100	95	124	209	247	288	315	361	394	421
Total liabilities	100	102	126	173	200	218	222	254	289	307

* 1937 = 100 per cent.

Source: See Appendix. Note: Where a particular account did not appear in 1937 data, the base year selected is the year the item was first included.

of total assets and total liabilities (equities). For example, cash amounted to 5.9 per cent of total assets in 1937, 11.4 per cent in 1946, and 8.7 per cent in 1952. For reasons of space the relative data for more prewar years were not developed, but it is felt that enough years are included to indicate important trends in aggregate corporation balance sheets.

Table 3 has been prepared to serve as a supplement to Table 2. It illustrates the relative growth from the base year 1937 of the various asset and liability accounts in a more striking way than does Table 2. It can be used to make growth comparisons that are not evident from an analysis of Table 2, since it shows the increases and decreases from the base year.

Both Table 2 and Table 3 offer considerable evidence supporting the self financing hypothesis. Especially significant are the changes that took place between 1937 and 1952 in the composition of assets. According to Table 2, current assets in 1937 were 41.2 per cent of total assets while fixed assets amounted to 58.8 per cent of total assets. By 1952, this ratio was almost reversed with current assets accounting for 56.0 per cent of all assets and fixed assets constituting 44.0 per cent of total assets. Reference to Table 3 indicates that the rate of growth of current asset items has exceeded the rate of growth of total assets while the opposite is true of fixed assets.

No attempt has been made to adjust the data by a price index. There is no question that net capital assets are undervalued in terms of present-day replacement costs. This is brought out quite clearly in Table 3. In real terms, the ratios in Table 2 are therefore somewhat misleading. As historical costs catch up with replacement costs, the fixed asset ratio will tend to rise. On the other hand, increasing liquidity in the current asset area will tend to offset this tendency. As a result of these two counteracting tendencies, it seems safe to say that the two ratios will continue to fluctuate somewhat in the future, but that the postwar rather than the prewar relationships will continue to prevail even after fixed asset acquisitions catch up with the present price level provided there is no rapid surge in the rate of automation in the future.

Accounts and notes payable do not appear to have shown any appreciable change during the sixteen year period—their rate of growth was only a little greater than the aggregate increase in all liabilities. Much more significant in the current liability area has been the increase in "other liabilities." Since these represent accruals of payroll taxes and similar items, it is easy to understand the growth in this category during a period when government regulations over industrial corporations multiplied very rapidly.

Especially interesting to observe are the changes that have taken place in the equity section of the aggregate balance sheet of American industrial corporations between 1937 and 1952. Preferred stock financing typically stages a comeback during periods of prosperity because it permits trading on the equity with less risk than is the case with bonds.[12] However, Table 2 indicates that the ratio of preferred stock to total liabilities and equities combined has shown a continuous, relative downward trend since 1937. In that year, the proportion of preferred stock to total liabilities and equities was 10.2 per cent and by 1952 it had decreased to 4.2 per cent of all balance sheet credits. Table 3 shows that the absolute amount of preferred stock outstanding at the end of 1952 was only 13 per cent more than in 1937.

During the years under study, long-term indebtedness increased from 8.8 per cent to 11.4 per cent of combined liabilities and equities. Combining this ratio with the one for preferred stock indicates that, despite its *a priori* advantages, trading on the equity has shown a relative over-all decline in recent years. The fact that long term indebtedness increased in 1951 and 1952, during a period of partial mobilization when excess profits taxes were in effect, tends to confirm the earlier observation that debt and preferred stock financing are employed to supplement internal financing when the desired rate of growth is greater than the rate that can be internally financed.

According to Table 2, the ratio of common stock to total balance sheet credits in 1937 was 36.4 per cent. By 1952, this ratio had decreased to 18.7 per cent. During the same time, the ratio of retained earnings grew from 27.4 per cent in 1937 to 41.6 per cent in 1952. The relative increase in the latter ratio is very significant when compared to the absolute increases in total equities that occurred during the period as indicated by Table 3.

The reader should bear in mind that the contrasts between earlier and later years are reduced because large amounts of stock dividends have been charged to earned surplus and credited to common stock. The relative differences over time would be even more striking if increases occurring in retained earnings appeared in that account rather than in common stock as is the case when stock dividends are made.

CONCLUSION

The evidence indicates that American industrial corporations are relying to an increasing extent on internal sources for both long term and short-term capital. As this practice has become increasingly prevalent, it has resulted in radical changes in the character of the corporation. Increasing liquidity has become an imperative to additional growth. In order to assure the survival and growth of the company, the management has been forced into diversification of product line. This diversification has provided both an outlet for the internally generated funds and a means of insuring the survival as well as the growth of firm by assuring a steadier flow of funds than if only one product were

[12] Donald A. Ferguson, "Recent Developments in Preferred Stock Financing," *The Journal of Finance*, (September, 1952), p. 449.

manufactured. At the same time, diversification has provided a continuity in the flow of funds by separating the indefinite or indeterminate period of existence of the firm from dependence on the life of a particular product which may cover a much shorter span of time

The growth and survival motives as expressed by self financing also undoubtedly go a long way toward explaining the postwar merger movement. To expand, a firm can either develop its own products through research or acquire smaller companies whose products are complementary in one way or another to its own. In any case, merger serves the purposes of both companies concerned. For the company that is absorbed, the merger solves the working capital problem. For the absorbing firm, the merger is an outlet for liquid funds that must be put to work earning a return.

In a similar way, the increasing trend of industrial corporations toward research and product diversification can be related to self financing. Survival and growth are closely allied to the concept that the product the corporation has to sell is the "capacity to produce." From the viewpoint of the firm, new products must be constantly developed if the capacity to produce is to be fully utilized. To carry out this concept, the least restraint on management flexibility is an internally generated flow of funds. To put it another way:

> The effect of innovation on big business as an economic institution is far-reaching. As the corporation is less and less committed to a specific product line, it acquires more of the character of an operating investment trust. It becomes engaged in rationing the use of capital and in that process it also becomes involved in the allocation of employment.[13]

One factor which Professor Avery mentioned in his paper as affecting the ratio of fixed assets to total assets was the stage of technology in the economy.[14] The trend toward automation in the United States has been increasing since the end of the Korean War. Automation, in turn, implies an increasing investment in machinery and equipment. Unfortunately, the data used in this study are not recent enough to indicate whether the fixed asset-total asset ratio has begun to climb upward. Furthermore, the recently approved depreciation methods will undoubtedly tend to distort the net capital asset balances appearing in the *Statistics of Income* at least during the first few years.

Professor Avery also discussed the business cycle and the stability of the price structure as having a bearing on the fixed asset-total asset ratio. Again, the data used in this paper are obsolete as far as this question is concerned. Currently both interest rates and prices are at very high levels. Despite the reluctance of corporate managements to "dilute" stockholder equities, an increasing amount of equity financing has taken place during the last year or two. As indicated earlier, many firms that have maintained self financing policies for years have recently begun to obtain long-term loan commitments from the commercial banks. These factors have caused changes in equity and liability ratios of which we are not yet aware because of the unavailability of the data in the *Statistics of Income*.

Finally, the present study suggest that funds statements, both at the level of the individual company and in the aggregate for all industrial companies, are necessary if we are to continue to trace the course of self financing and its impact on the economy. Balance sheet analysis, of the kind that has been attempted here, is at best a very crude method of analysis. The role of large corporations in our society as invest-

[13] A. D. H. Kaplan, *Big Enterprise in a Competitive System*, (Washington, D.C.; The Brookings Institution, 1954), p. 194.

[14] *Loc. cit.*, p. 438.

ment trusts or self financing organizations is important enough so that increasing attention should be paid to the sources and applications of the funds of these largely self-contained "capital markets."

APPENDIX

The *Statistics of Income*, which are the basis for Tables 1 and 2, are released annually by the Internal Revenue Service of the United States Treasury Department. The tables in this paper are based on all industrial companies that submitted balance sheets with their federal income tax returns. The release date is usually four years after the year to which the data relate. For this reason they are somewhat unsatisfactory since they are rather far removed from the current scene. On balance, this disadvantage is offset by the fact that they are very comprehensive since they include data for all industrial corporations that submit balance sheets with their annual income tax returns. Another disadvantage is that the data for 1951 and 1952 are preliminary and therefore subject to change. However, any changes that are made in the data for these two years will probably be relatively minor.

Due to limitations of space, the original data, which appear in absolute form, have not been incorporated into this paper. Those readers who desire copies of the original worksheets may obtain them by referring to the writer.

Source for Table 1 data is Table 6, Part 2, pp. 192–193, *Statistics of Income*, 1950.

Sources for Tables 2 and 3 are as follows:

1937 Statistics of Income, Part 2, Table 4, p. 71
1939 Statistics of Income, Part 2, Table 4, p. 115
1941 Statistics of Income, Part 2, Table 4, p. 104
1946 Statistics of Income, Part 2, Table 4, p. 148
1947 Statistics of Income, Part 2, Table 4, p. 128
1948 Statistics of Income, Part 2, Table 4, p. 132
1949 Statistics of Income, Part 2, Table 4, p. 118
1950 Statistics of Income, Part 2, Table 4, p. 116
1951 Statistics of Income, Part 1, Table 3, p. 221 (Preliminary)
1952 Statistics of Income, Part 1, Table 2, p. 19 (Preliminary)

A LOOK AT ACCOUNTING PRINCIPLES USED BY OIL AND GAS PRODUCERS

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Over a period of years generally accepted accounting principles have evolved which most of us recognize and attempt to observe, even though we may feel that some of them should be modified or revised. Usually these principles are deemed to be applicable to business activities in general and thus are appropriate for all industries.

Many accountants wonder if sweeping modifications of these principles might be desirable to fit the needs of a particular segment of business or an industry as a whole. It is recognized that peculiarities of certain situations place an industry beyond the "generally accepted" realm and in a category apart. Nowhere is this argument more widely used than in the petroleum industry where the "risk" involved makes most accounting and management personnel ultra-conservative. Also, special income tax considerations for oil and gas producers have tremendously enhanced the feeling of uniqueness prevalent among oil companies.

The resulting tendency to disregard generally accepted accounting principles was graphically indicated by a survey made of accounting policies and practices followed by sixty-one oil companies in this country in dealing with costs of acquiring and developing oil and gas properties. The study revealed an amazing inconsistency in the industry and in some cases apparent disregard for financial accounting principles. The wide variations among companies in accounting for similar transactions could be classed as nothing short of astounding, and, strangely enough, each individual practice is regarded by its proponents as being the correct one.

Before pointing out some specific examples of what may seem to many of us to be unwarranted inconsistencies within the industry in accounting for leasehold, exploration, and development costs, we shall outline some of the basic points which must be considered in selecting from the various optional practices a proper accounting treatment for most situations arising in the petroleum producing business. Each oil producer places emphasis on some one consideration, which, more than any other, determines the company's accounting policies and principles. However omnipotent this one consideration may be, though, the firm cannot completely ignore other factors which are also of prime importance. Five of these factors are: (1) federal income tax considerations, (2) practicality and simplicity, (3) conservatism, (4) consistency, and (5) theoretical correctness.

Federal Income Tax Considerations

Probably the most important determinant of accounting policy today for the petroleum industry is the Internal Revenue Service which dictates the accounting treatment to be used for federal tax purposes in nearly every transaction. These tax requirements exert strong influence on financial accounting in three important ways:

(1) First, and probably most important, is the need for (or lack of need for) duplicate records for financial and tax purposes. The keeping of two partial sets of records is an expensive proposition, especially in these days when we pay a beginning clerk more than $300 per month.

(2) Second, the desire to have added basis for argument may lead the firm to follow a practice for financial accounting

that it does not really believe to be correct, simply because it has done the same on the tax return. This frequently happens in cases where no hard-and-fast tax rule has been established. If the producer has adopted a treatment for financial accounting as well as for tax purposes, he has an added argument in the event it is questioned by the Service.

(3) A third effect of income tax requirements is felt in those situations where no great conflict between the opinion of the taxpayer's accountants and the required handling exists, or in some cases where there is a great deal of support for several possible treatments of a transaction. In such cases, the company may adopt the tax method simply for convenience and simplicity.

Practicality or Simplicity

A question of prime importance is the practicality of the accounting policy selected. Emphasis must be placed, especially during the present period of high costs, upon the ease of administration of the accounting treatment given any transaction. Policies and methods that require extra hours of detailed analysis and calculation, no matter how correct theoretically, must be weighed to determine whether the benefits to be gained are worthy of the extra costs involved in following them.

Conservatism

Conservatism seems to be one of the cornerstones of petroleum accounting. An essential of good accounting is that worthless assets shall not be assigned large carrying values in the accounts. Some producers allow conservatism to dominate their entire accounting policy, and especially is this evident in a few closely-held companies and in individually owned firms. Such firms do not face the task of satisfying a large number of stockholders, who, having little knowledge of accounting, are impressed by large asset values and book profits. Conservatism is apparent, too, in the large major firms which are well established and are not primarily interested in showing increased growth in the financial statements from year to year.

Consistency

Consistency has two virtues to recommend it. First, to present a fair and accurate financial picture, accounting must be performed on a basis consistent with that of the preceding year. Second, the abandonment of one accounting policy and adoption of another necessitates the adjustment and correction of records, with particularly great problems encountered when large amounts are involved in the change.

Theoretical Correctness

On first glance, it may appear that the petroleum industry has drifted away from the criterion of theoretical correctness in choosing its accounting policies. A closer look, however, may indicate that there is no complete body of principles generally accepted as theoretically correct for the industry. There are hundreds of items encountered by producers on which an honest difference of opinion exists among accountants. There may be such a division of thought regarding some transactions that three or more solutions, (as will be seen later, 15 in one case) each supported by valid arguments, may be advocated.

These five considerations: tax requirements, practicality, conservatism, consistency, and theoretical correctness should be kept in mind as some of the specific areas of conflict are presented below.

SOME EXAMPLES OF LACK OF STANDARDIZATION

Data was obtained from 61 oil companies that produced about 1,500,000,000 barrels of oil in 1953, or over 60 per cent of the nation's total for that year. Accounting policies are presented with respect to

four or five wide categories of items. These are only a few of the important ones on which a great deal of difference of opinion exists and which point out the need for establishment of a body of generally accepted accounting principles for the industry. Although it is usually recognized that all costs incurred in acquiring a productive asset should be capitalized, this principle is partially ignored by oil accountants, as illustrated below.

Geological and Geophysical Exploration Costs

In searching for oil and gas reserves, tremendous sums are spent for geological and geophysical exploration. This is one of the most interesting areas of petroleum accounting and one in which a wide diversity of opinion exists. There are three theoretical views that might be taken, although space does not allow presentation of arguments supporting each. These are:

1. Expense all exploration costs. (This is followed by about 35 per cent of the firms that carry on exploration activities.)

2. Capitalize only those exploration costs that can be attributed to the discovery and development of specific oil and gas reserves. (This is followed by about 65 per cent of the companies.)

3. Capitalize all exploration costs, regardless of results. (None of the firms do this at present.)

Briefly, the accounting treatments given "g and g" costs may be summarized as:

1. Where payments are made to outside exploration firms for making surveys, 38 of the 61 companies (about 62 per cent) capitalize costs of work that leads to reserves, while 22 charge to expense all such costs regardless of outcome. One company conducts no exploration. It is particularly interesting to observe that among 35 smaller companies, thirty (or about 85 per cent) capitalize a part of "g and g" costs.

2. When exploration work is performed by the operators' own staffs, there is a greater tendency to expense the costs. In this case, 44 firms (or about 72 per cent) expense all costs, while only 14 (or about 23 per cent) make any attempt to capitalize any part. Three firms have no exploration crews.

There are a number of reasons why more companies expense costs of their own staffs than costs of outside surveys, but basically these are: (1) costs of one's own staff will be relatively fixed, (2) it is harder to allocate costs, and (3) income tax considerations.

The degree of controvery present in the industry regarding the proper accounting treatment to be given geological and geophysical exploration costs can be illustrated by the case history of one of the larger companies that have given intense consideration and a great deal of research to problems involved. This major operator has changed its policy with regard to these items four times since 1930, as summarized below.

First period: Prior to 1934, all leasing and exploration costs were expensed in full.

Second period: During the years 1934 through 1939, all leasing and exploration costs were capitalized, but were not allocated to specific leases. The amount to be amortized yearly was determined by the ratio of net production during the year to estimated total net recoverable reserves.

Third period: From 1940 through 1943, a portion of leasing and exploration costs were capitalized. The amounts capitalized were those associated with specific lease acquisition and development. During this period, the costs applicable to 1934 through 1939 (when all costs had been capitalized) were amortized on the basis of production on each lease.

Period four: To bring financial accounting records into agreement with tax re-

cords, from 1944 through 1947 some additional costs were capitalized as required. Effective in January, 1944, the method of amortization of capitalized costs was changed to a flat sum per barrel.

Fifth period: Since 1948 all leasing and exploration costs have been expensed (back where we started). On January 1, 1948, the unamortized balance of costs capitalized from 1934 through 1939 was written off. In each year, 1948 and 1949, one-half of the costs capitalized between 1940 and 1947 were written off.

It is obvious that not only do we have a division of opinion among companies, but within individual firms.

Intangible Drilling Costs

A very large per cent of the costs of an oil company are incurred in drilling oil wells and developing leases. Those costs of labor, drilling, contact work, etc. which in themselves have no salvage value are referred to as "intangible drilling and development costs," or more simply, "IDC." The IDC of one well may run into hundreds of thousands of dollars.

It was surprising to find that 15 (or $\frac{1}{4}$) of the 61 companies expensed IDC of even producing wells. Naturally, conformance with tax practice was the big reason for doing so, although many petroleum accountants argue that the costs of drilling even a productive oil well may not result in sufficient income to recover the expenditures. There seems to be little justification for expensing the intangible costs of drilling a productive well. What would happen if one were to suggest to an accountant that the builder of a factory building should charge to expense all the costs of labor, depreciation of equipment, etc., and capitalize only direct costs of materials?

Of course, if the well drilled proves to be a "dry-hole" there is legitimate ground for charging the intangible costs to expense, a practice followed by 56 of the 61 companies.

Amortization of Undeveloped Leases

In order to find profitable oil reserves, it is necessary to acquire leases on many acres of land which will later be surrendered because they prove to be unsuitable or non-productive. It is probably a conservative estimate that less than 10 per cent of all acreage leased is retained by oil companies for development. As a result, many accountants feel that the costs of undeveloped properties should be amortized by periodic charges to expense. There are really some debatable problems involved in leasehold amortization, although only 13 of the 61 companies (a little over 20 per cent) amortize leasehold costs at the present. Many others would like to do so, but feel that practical difficulties involved are too great. Actually, the practical problems may be easily solved if the lease-unit basis of amortization is abandoned.

Free-Well Agreements

In the study, a simple "free-well" agreement, a common contract in the industry, was presented. Under this arrangement, an individual who owns a lease assigns an undivided interest in the lease to another individual for a consideration on the latter's part to drill and equip one well (or more) free of charge to the assignor. Each party, then is to have an undivided interest in the lease, equipment, and production.

It may be surprising to realize that 15 different methods were given by which the agreement would be handled—something of a record.

ACCOUNTING PRINCIPLES RELATED TO COMPANY SIZE

Throughout the study, it was observed that smaller companies tend to capitalize

more items of cost while larger operators tend to be more conservative. This seems to be due to a number of factors, among which are:

1. Smaller operators tend to follow tax requirements more closely, which requires capitalization of more items.
2. Most of the larger companies purposely place greater emphasis on conservatism while some smaller companies seek to show growth figures—larger assets and profits.
3. Because smaller companies have fewer leasing transactions, etc., the detailed work involved in allocating costs and maintaining detailed records is not so great as in larger ones.
4. Many of the payments are small and hence regarded as individually immaterial by larger companies, while they may be considered as important amounts by smaller operators.

THE NEED FOR STANDARDIZATION

What can be done about this wide divergence of practice? And, why should it be done? Let's examine the second question first.

From the viewpoint of both individual oil companies and the public, a greater degree of uniformity appears to be desirable. Adoption of a basic set of accounting principles by the industry would allow stockholders and other users of financial statements to make more valid comparisons of the financial positions of the producers. With the existing variety of treatments being followed, it is difficult, if not impossible, to make any satisfactory comparison of published reports of oil companies.

Greater unformity would be a value to the industry also, because it would permit the direct comparison of operating statistics of one producer with other companies. This could assist management in making operating decisions and in cost control.

Considerable emphasis has been placed on the desirability of greater similarity by the American Petroleum Institute which has drawn up a "Uniform Chart of Accounts" for oil producers. The Institute has also shown its interest in making available a larger volume of information on accounting practices in the industry and achieving greater standardization by considering, several years ago, an extensive research project designed to determine what policies were being followed by its members, and why. However, the project was abandoned.

Granting that a higher degree of standardization in petroleum accounting is desirable, it follows that the most effective way by which this can be brought about is the dissemination of information among oil companies and accountants. This could be partially accomplished by direct exchange through the trade associations, especially the American Petroleum Institute, the Independent Petroleum Association of America, and Petroleum Accounting Societies. However, a natural reluctance on the part of companies to reveal information to competitors may make such a plan unworkable. Also, the direct exchange of data would probably attract the attention of federal officials, always with the possibility of arousing anti-trust action.

Pressure on the part of public accountants and auditors could probably encourage some degree of standardization, although the present tendency is for them to accept principles of accounting for oil operators that they would not accept for other business enterprises. Renewed emphasis in college accounting courses, especially in petroleum accounting courses, on correct principles, may in the long run bring about desirable results.

In summary, it appears that petroleum accountants have not been given a clear

picture of the industry as a whole, but are restricted in their views to the accounting policies and particular practices of the company of which each is a part. The lack of knowledge of accounting methods of other companies is not a result of absence of interest and desire on the part of accountants, but is due to the dearth of information available. Petroleum accountants should think seriously about the somewhat helter-skelter pattern of accounting for costs of finding oil, and if they see better methods or policies being used by another company, should claim these for their own, even though the change-over problems are troublesome. Such action may eliminate the feeling on the part of many members of management that accounting contributes nothing to the success of the enterprise, but serves only to measure the contribution of other activities. At least it is worth a try.

BUSINESS COMBINATIONS

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THE April, 1957, issue of the *Journal of Accountancy* contained a proposed "alternate view" by George O. May to *Accounting Research Bulletin* No. 48, "Business Combinations." The comments which follow were evoked by his article.

Mr. May's View

The basic assumption implicit in Mr. May's article is that the business which "emerges" from a combination of predecessor businesses under conditions including combination (May would prefer "exchange") of interests of their owners constitutes a *new* accounting unit.

Relying on this assumption he directs most of his attention to "the really important question [which] is what monetary ascriptions should be given to existing capital assets on the books of the emerging corporation." He introduces as relevant to this question three areas of investigation by previous Committees on Accounting Procedure, citing a letter to the executive committee of October 20, 1945; ARB 23 and chapter 10(b) of ARB 43; and ARB 24 and chapter 5 of ARB 43.

His evaluation of the related problem of reporting stockholders' equity is limited as a consequence of his view that disposition of retained earnings or deficits of constitutent companies "is in itself a question of minor importance."

Mr. May's conclusions about "monetary ascriptions" in the accounts of the combined business can be summarized as follows:

1. Assets should be presented at their values at the time the combination is legally effected.
   a. Their values are not affected by "original cost"—or carrying value to prior owners of the assets.
   b. They are affected by the amount of tax deduction which the assets make available.
   c. Their values, in the case of type (b) intangibles, should not be permitted to affect subsequent periodic income measurement.
2. Retained earnings or deficits of the constituent companies should not be carried forward. How liabilities and stockholders' equity should be shown he does not otherwise say.

Choice of the Accounting Entity

The fundamental accounting problem in the business circumstances described by ARB 48 and by Mr. May is selection (or definition) of the entity, or unit of organized activity, to which the accounts are to relate.

Mr. May does not state precisely what unit he prefers, but it might be the corporation as a legal entity. He notes, for example, immediately after contrasting the *enterprise* with the corporation that "it would be both impractical and undesirable to attempt to apply the 'enterprise' concept to corporate accounting outside the regulated areas."

If the corporate entity were his choice for an accounting entity, his "alternate view" would be applicable only in case of *consolidation*, where a newly-chartered corporation succeeds the constituent companies. The only evidences that he contemplates such a limitation are scattered references in his article to the "new" company, the "new" taxable unit, or "new" corporate entities emerging from combinations or reorganizations.

Opposing such an interpretation of his view is the fact that Mr. May does not disclaim applicability of his view to the

same areas covered by the Committee on Accounting Procedure. It will be recalled that its ARB 48 applies to any of several legal forms for combining businesses, "such as a merger, an exchange of shares, a consolidation, or an issuance of stock for assets and businesses."

If the corporate entity is not Mr. May's exclusive choice for an accounting entity then one may wonder if his disparagement of the "enterprise" concept is not largely pragmatic and *limited* to the context of original-cost and public utility accounting, in spite of his contrary view quoted above.

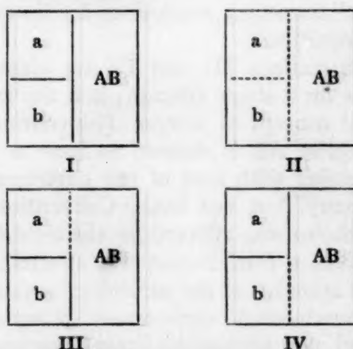
Such an interpretation of his position seems reasonable. It is consistent with the accounting concept in quasi-reorganization of an "enterprise" (distinguished from the continuing legal entity) which takes a new start; Mr. May cites with apparent approval the accounting procedure for implementing this concept. Furthermore he seems impressed by the view he attributes to Adams and others that "the monetary ascriptions on which charges against future revenue are to be based should be revised periodically," perhaps as often as every fifteen years. Subject to possible exception if he has in mind revalorization of recorded figures exclusively to reflect changes in the purchasing power of the standard of value, this view would effectively replace the corporation as the accounting entity by a succession of fifteen-year-long "enterprises" or ventures.

The point to be made is that Mr. May appears to be advancing as the relevant accounting unit a narrow conception of the "enterprise": one *succeeding* the participating companies in a business combination.

By contrast, the Committee on Accounting Procedure (after carefully denying that the nature of the *legal* entity is relevant) advances another conception of the "enterprise": one of which the constituent companies *were* and are simply components or divisions. This concept of the accounting unit is stated in ARB 48 in another form; and it is necessary to the conclusion in that bulletin that previously recorded asset and earned surplus balances should be continued and fused, and that comparative statements of operations covering periods prior to the combination might include the operations of both constituent companies.

It is interesting that, in excepting combinations of corporations of markedly disproportionate sizes, both the committee and Mr. May admitted a third conception of the accounting "enterprise": one coextensive with the dominant legal entity. It is submitted further that one could just as easily conceive the alternative situation in which the legal entity of the other participant in the combination was preserved (as sometimes happens) and *deemed* to correspond with the accounting "enterprise."

Thus it follows that, ***given sufficient justification***, accounting could reflect the activities of any of several "enterprises" which easily could be defined. Four of these possibilities are illustrated in the accompanying diagram. Obviously, these possibilities could be compounded if more than two companies were participating in the combination.



Alternative Concepts after a Business Combination of the Accounting Entity

Each of the illustrations is interpreted as follows:

(1) The horizontal scale represents time.

(2) The bisecting vertical line represents the date the combination is given legal effect, and separates past from future.

(3) The quarters a and b represent the previously recognized enterprises or entities associated with participating companies A and B, respectively.

(4) The area AB enclosed by *solid* lines represents the entity selected or defined at the time of the combination as the conceptual basis for the accounts in the future.

Mr. May's concept is illustration I. He treats the date of the combination as the beginning of an accounting enterprise—with no account history—faced with an urgent need for monetary ascriptions for the assets (and presumably creditor and stock interests) which it acquires.

The committee's concept in the case of a "pooling of interests" is illustration II. To it the date of combination is only the occasion for integrating in one formal set of accounts accumulated transactions statistics previously maintained in two sets. Previously recognized entities a and b are *deemed* (and this presumably on informed judgment) to be complementary parts of entity AB. By this conceptual exercise, a history of transactions is attributed to AB; therefore it need not resort to "new" monetary ascriptions for its assets and equities.

Illustrations III and IV are alternate forms for a single concept; it is the traditional concept of merger. The continuing enterprise AB is deemed to have a past coinciding with that of one participating company, but not both. Conventionally the choice was affected by the legal form in which a combination was effected, the basic accounts of the surviving (or parent, or purchasing) corporation being preserved, new accounting bases being sought only for assets and equities acquired from the dissolving (or subsidiary, or selling) corporation.

The selection of an appropriate accounting entity from these or others is necessary and antecedent to every other action in accounting.

Ancillary or Subsequent Problems

The matters to which Mr. May devoted most of his article are neither inclusive of problems arising subsequent to business combination nor more applicable in "combined" businesses than others. They have already been covered by the Committee on Accounting Procedure in the letter and bulletins he cites, and extensively elsewhere in the literature. They have no unique relationship to business combinations and should not be settled solely in that context.

Any or all of the rules Mr. May advances could be implemented under any of the concepts of the enterprise considered here. For clarification of this point one may reexamine the conclusions of Mr. May paraphrased in the introduction to this article.

Original cost, or carrying value to another entity is indeed not relevant to the accounts of any of the entities under consideration. It violates an accounting convention ("cost") to the effect that only values explicit or implicit in transactions to which the subject entity is a party are admissible to its accounts.

The potential equity of the government in any asset "value" in excess of the tax basis should certainly be recognized by any accounting entity. Mr. May's proposal in this matter is interesting primarily in that he offsets the deferred tax against the asset, instead of showing it explicitly as an actual or potential claim of a creditor.

Any generally accepted accounting procedure in connection with type (b) intangibles can be implemented by any accounting entity on whose books such intangibles appear. How Mr. May associates the issue

of amortization of type (b) intangibles with business combinations he does not make clear. The issue most certainly is not uniquely relevant to combined businesses; it is suggested that it has no more importance in this area than in accounting generally.

Finally, it is self-evident that no entity not *deemed* to have a past can have *retained* earnings, by whatever terms described.

CONCLUSION

It has been the sole purpose of this **writer to emphasize the identification of the accounting unit or entity as the fundamental problem presented by business combinations. It is not his present intent to advocate any of the concepts described here. Mr. May and the Committee on Accounting Procedure have thus far assumed roles of advocacy, but neither has given any compelling or even relevant reasons for the adoption of one concept of entity to the exclusion of all others.**

The profession hopes that from them or other authorities these reasons will be forthcoming.

THE MASTER'S DEGREE WITH COURSES IN BUSINESS, YESTERDAY, TODAY, AND TOMORROW

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SEVEN YEARS AGO we had occasion to study the Master's Degree in Business and contacted a number of schools offering that degree. In 1957, we have followed through with an inquiry of a similar nature but contacting a greater number of schools. This study was made for the Master's Degree Committee of the School of Business of Indiana University for the guidance of the Committee. The results, however, may be of interest to others.

A carefully constructed inquiry was sent to 110 schools shown offering the Master's degree with courses in Business from a list compiled by Delta Sigma Pi. Our list included state supported schools, private schools, large and medium and small schools. Ninety-eight complete replies with full data were received. For seven of the remaining schools data was assembled satisfactorily from other sources. Five schools either did not have such programs, the programs were too new, or they did not reply. While 105 cases is certainly a very extraordinary return, little attempt has been made to use percentages. Such a plan would for the most part be inapplicable. Neither is any distinction made as to such things as size, method of support, religious denomination. The quality of the program and the extent of offerings as well as careful planning are not related to any one criterion.

The history of the Master's degree is sufficiently well-known to those who would be interested in the present study that no attention need be given to it. The value and significance of such a degree is hardly open to serious question at this time. It has already proved its worth. Business currently is offering $50 to $70 a month more for an applicant with a Master's degree than one with a Bachelor's degree. While we do not think that titles are particularly significant, there is an attempt often to carry in the name of the degree some implication as to the coverage required to obtain it. Usually a Master of Business Administration is the title preferred and used at the present time. Because of the development from other backgrounds and other degree titles we often find the Master of Science degree and occasionally the Master of Arts designation. There are also various special titles such as Master of Business, Master of Commerce, Master of Arts in Business, and Master of Public Administration. Sometimes there is one title when the thesis is required and another when it is not. These designations are of particular significance to the individual school. Sometimes special fields of business are brought into the title, such as Master of Science in Accounting, Master of Science in the Science of Statistics, Master of Business Education.

While this inquiry is not fundamentally interested in the doctoral program, we did include some questions regarding it. The Master's degree is sometimes considered as terminal and sometimes as a foundation step toward the Doctor's degree. The two objectives are usually well harmonized and actually there need not be too much difference between the requirements. The title Doctor of Business Administration has replaced the title of Doctor of Commercial Science. The D.B.A. is offered only by George Washington University,

Harvard University, Indiana University, and the University of Washington.

The advanced degree most often available to students in Business is the Ph.D. As will be indicated later, some schools have the D.B.A. in their plans for the next five years or so; others are working toward the Ph.D. degree in a similar manner. The D.B.A. degree is rather new, and it is not yet determined as it now stands that it is the best degree for many schools to offer. If this had been decided, more schools would have switched to it or added it to their program. Of course, one does not consider that weight of numbers is weight of authority, nor does one overlook the modifications often available whereby the requirements for the Ph.D. degree retain much of their historic advantages and through greater flexibility incorporate the study of business. One is also aware that the matter of building up a more or less specialized faculty involves time and expense and many special courses. Perhaps one might say that there is, at the present time, careful consideration being given to the D.B.A. and there is evidence of a small and slow trend toward the offering of that degree. Reference is not made here to the number of graduates but to the number of educational institutions. It may be that programs leading to the D.B.A. are attempting too much. Negative criticism should be light as the degree has to have time to mature. On the whole, the results have been most encouraging and indicate a promising future.

For a long time, it has been recognized that many students of superior ability need financial assistance in order to go to college, and this is particularly true if they continue on beyond the first degree. In the last few years many wives have helped their husbands through a graduate program by working as secretaries, statisticians, and in other positions. However, almost all schools feel the need for more financial assistance for graduate students. The problem is how to obtain the necessary funds. In general, the schools have been holding to scholarships for tuition, fellowships for larger amounts including room and board, assistantships with a little greater flexibility, teaching assistantships, teaching associateships, and instructorships for top amounts; loans are available all the way from small amounts like $50 up to all the student needs. Since loans have to be paid back, often with interest, the student is reluctant to take a loan if he can secure the means some other way. In fact, as compared with seven years ago, the non-service type of grant is gaining and the requests for loan funds decreasing.

To the best of our knowledge in almost forty years of experience in teaching, there never has been a time when admission to the graduate program was being considered in a more discriminating fashion. One of the evidences of that fact is that many schools now have as a requirement for admission the completion of the Graduate Record Examination, tests prepared by other organizations, tests devised by groups of schools or by the individual school. These tests are not a substitute for adequate undergraduate college performance, personal recommendations, and other criteria. They are instead an additional evaluation. If an individual makes a low grade on the examination, he may not be admitted as a degree-seeking candidate until he has completed additional study (say a quarter or semester) creditably or in some other way demonstrated his ability to proceed.

Certain personal qualities are as important as mental ability. This fact has long been recognized in the case of the Doctor's degree. It is filtering down now to the Master's degree. Of course, it is recognized that there are different kinds of abilities and combinations of personal

qualities. In many cases, those who have replied to our inquiry have indicated with additional comment that such students must have good conduct, a sense of responsibility, and a cooperative attitude; or, to put it another way, "mature judgment, seriousness of purpose, facility in human relations." A degree from a four-year accredited college is universally accepted, or almost to that extent, as one of the bases for admission. Once in a while some additional requirements are set forth. These are in the nature of subject matter and are not related to what has been mentioned before.

The American Association of Collegiate Schools of Business has exerted considerable influence on the subject matter recommendations. Many schools, however, have not followed the seven areas stressed. We find that economics, accounting, statistics, and finance are rather universally required as subject matter background. Slightly less in prominence are marketing, management, and business law. Rather infrequent are transporation, insurance, and general business. It is true, however, that other subjects or areas are frequently included by certain schools, such as English expression, general psychology, mathematics, physics, human relations, research methods, American government, and science.

The manner in which the basic knowledge may be demonstrated is influenced to a great extent by the facilities of the school. Course work is usually the means employed, with the "B" average standing out as the minimum. However, "C" is often designated as adequate, and rather rarely "D." There is an increasing trend toward the use of the graduate survey course as a means of making up deficiencies. It is rapid and intensive. Written examinations are receiving increasing approval. Sometimes business experience is, when appropriate, evaluated to meet part of the requirements. In growing favor is the comprehensive type of examination in addition to course work. This may be offered on the graduate level or may be offered toward the end of the undergraduate program as a testing device.

It has long been a question as to how much work should be required beyond the first degree to complete a Master's degree. There is considerable difference of opinion depending upon the objectives of the program, its technical features, the length of time administrators in charge think is justified by the degree considering its terminal nature or screening for the doctoral program, and the students' view. We tend to mark things off as so many months or a calendar year or so many semesters or quarters. In this presentation, semester hours are used. To indicate the diversity of viewpoint, these hours vary from twenty-four to sixty-four, although it should be noted that thirty is by far the most common. This is either a two-semester (fifteen hours each) program or two semesters and a summer of twelve, twelve, and six hours. There is a tendency for a Master's candidate to want to hurry because of expense and other factors and for the faculty to break down the rules and let the student take more than he can carry to the best advantage. The programs, are, one might say, divided between the one- and the two-year programs. They often differ with the degree title in the same school, such as M.S., M.A., and M.B.A.

While it is the aim, we presume, of all schools to have the graduate student take only graduate work for credit, that is hard to achieve. Consequently, advanced undergraduate courses are quite often included. Some schools allow none of these. At the other extreme is as much as 70 per cent. Usually between one-half and one-third of the hours required for the Master's degree can be so taken. There is undoubt-

edly a desire and a trend to allow less undergraduate credit and to add more graduate courses. This development seems to be sound.

As to the number of courses required outside of the major field, there is no clear picture except the picture of diversification. For example, some schools have no majors as such at all. When it comes to the number of fields outside of the major field, one, two, three, and four are usually found. There are some cases over four and there are some in which no fields at all are set up. In general, however, there is a recognition of the desirability of a field or fields other than the major.

A thesis or its equivalent is usually required, thereby recognizing the value of guided research. This work has been added by some schools and dropped by others in the last few years. Those dropping it are often reluctant to do so, but are compelled to discontinue it for lack of staff time. A considerable number attempt to bridge the gap by the use of the option. This alternative permits a student who has the capacity and really wants to do effective research to have proper guidance and to accomplish his purpose. Those who do not have such a purpose tend to stay away from the thesis because they think that they can acquire the same number of credits with less work by taking courses. An oral examination on the thesis is ordinarily given, although some schools prefer a written examination. A few are inclined to require both. Others leave the matter to the discretion of the advisor.

Since the thesis is in addition to the subject matter of the courses which are required, there is always some question as to how much time and credit should be allotted to it. A few schools go as high as nine hours, but six is usual. Many allow three or four hours.

Schools like to grant degrees with the mark of the school's training upon the individual. Accordingly, they are inclined to require twenty-four hours of residence credit. There is, however, quite a bit of variation above and below that figure.

While the 3-2 plan of three years of arts and science and two of business leading to the Master's degree is discussed and often approved, it is seldom put into effect, except indirectly.

While a Master's degree candidate who continues his study immediately after obtaining his first degree is not very far removed from the thinking of a college senior, it is nevertheless felt that different methods of instruction should be applied. A great change takes place in the graduate student during his first year of graduate study. Case studies are now almost universally employed as are also the lecture method and adaptations of the conference method and the seminar method. Usually more than one procedure is followed by different instructors. Two newer methods, operations research and incident, are not so widely used as yet. With the increased emphasis on the study of mathematics and its practical uses, "operations research" is gaining recognition. There are situations when this type of thinking is very productive. Mathematical models, linear programming, and such devices are being applied to problems of business. We find that a considerable number of schools use this method along with other methods. Seven years ago it was almost unheard of even by a different title. The incident method is used in about one in six of all schools. In essence, it consists of taking an important incident which touches off a considerable reaction and tracing back from that through the build up of pressure which resulted in the incident and going forward to means of solution and future prevention of similar occurrences. This method is provocative and has in it current aspects of reasonable usefulness.

While there is universal continuance of

the plan of examining the student in each course as he takes it and completes it, it is felt that this alone is not sufficient. At the end of the Master's study, examinations are almost always given. As compared with a few years ago the comprehensive, integrating type of examination is in the overwhelming majority. Such an examination has many values and many difficulties. Some schools feel that the examination should have many of the aspects of a small case study. The Master's examination is about fifty-fifty written or oral. Sometimes it is both. Since schools of business have several specialized fields, it is rather common practice now to devote a section of the examining period to the student's specialty. The examination may be divided into parts, such as Part I, General Integrating or Core—3 hours, Parts II and III, Areas of Concentration —3 hours; Part IV, Oral—1 hour. Another illustration is Part I, Integrating——2 hours; Part II, Specialized—2 hours. Some schools prefer to give a two-hour oral examination. A variation in procedure is for the student to invite a member of the Graduate Faculty to assist his committee with the oral examination. The oral examination in some cases is confined to to defense of the thesis. Some schools give the student an alternative between an oral examination of some length and comprehensiveness or the writing of a thesis.

Certain other regulations were investigated. The results will be enumerated briefly.

1. Credit toward the Master's degree is not allowed for correspondence study.

2. The hours which may be transferred from other accredited institutions to meet the requirements of the degree vary from four to ten hours, but six hours is most common, with eight or ten not far behind. Occasionally, over ten hours under unusual circumstances are allowed. Quite commonly the transferred credit must be "B" or better.

3. Almost all schools feel that the candidate cannot complete his degree work in less than one year. There is no change in that situation. A few schools advocate two or three years, depending on their programs. A two-year program sometimes is indicated in which the student is actually a special student for the first year while he removes his deficiencies. Some schools have indicated that they have set no minimum length of time. On the other hand, the maximum allowed to complete the degree ranges from four to eight years with six, five, and eight more common in that order. Occasionally, a school is found which has no limits on the maximum time a student may take to complete the degree.

4. All schools are more or less grade conscious. They feel that the work of the graduate student should be of good quality. A minimum grade may be set, but more often it is an average grade. "B" or its equivalent is almost universal, although we do find occasionally "C" or "Pass." During the last seven years some schools have moved upward in grade requirements; none have moved downward.

Since averages are used, a lower limit for a grade to receive credit needs to be set. The highest no-credit grade which can be accepted toward a degree is usually "C." Sometimes "D" or "E" are specified and rarely "F."

The minimum passing grade in any course does not correspond in frequency to what might be assumed from the previous paragraph. "C" is usually a passing grade, although as has been noted it may carry no credit. Occasionally, "B" or "D" are the minimum passing grades.

The concluding section of the inquiry dealt with three very important questions: A. From a practical viewpoint, what are the chief objectives of your program? B.

What is new (i.e., during about the last five years) in your program? C. What developments do you anticipate in the near future (during about the next five years) in your program? The replies will be discussed in that order.

From a practical viewpoint, what are the chief objectives of the Master's degree program? Catalog descriptions are usually well written and often go somewhat beyond practical objectives and potential realization. One receives the impression that possibily too much is expected from one year of graduate study. Accordingly, each school was asked to be as realistic as possible.

The objectives are varied and yet follow a pattern of similarity under six groups as follows:

1. The program is to provide immediate usefulness through the study of tool areas, the acquiring of advanced specialized knowledge, and the attainment of an understanding of the application of this information.
2. Training in analysis and research is essential. As one school expressed it: "Competence in orderly, analytical exploration and handling of problems." While the student should have received training in writing before receiving his first degree, many schools wish to make sure that he can demonstrate that ability before receiving the Master's degree. The thesis is evidence.
3. Preparing prospective teachers for their profession is definitely among the objectives. This has been the case for a long time, but schools are all the more conscious of the opportunity since statistical projections have indicated the probable extent of teacher shortage in the years ahead.
4. Realizing that most of the doctoral candidates come from the graduates with the Master's degree, schools use this degree to offer background work for the study of the next two years.
5. Stress is placed on preparation for future responsibilities as managers, administrators, owners or in governmental positions. An opportunity is offered to "develop abilities, knowledge, understandings, attitudes, as a foundation for growth into responsible business leadership" if the qualifications and background of the student are such that he can do his part. Concepts give breadth; constructive skepticism is encouraged. The student is to appraise "accepted judgments, expressed opinion, and current practices."
6. Finally, penetrating all other objectives is a "respect for intellectual honesty, stability of conviction and strength of character," the development of an understanding of the social and economic system, human relations and the obligations as well as opportunities of leadership, independence of thought with maturity of character. One school concisely says: "Professional competence in business techniques and ethics."

Not all schools are equally optimistic about attaining the objectives as listed. Some students will succeed but, although selectivity is tending to become more exacting, it is much less so than on the doctoral level.

How to implement the varied objectives is the problem. Take number six, (above) for example. A course in ethics is sometimes made available to clarify thinking. Penalties are inflicted for non-ethical practices within the province of school administration. Informal discussions are held. The impression, however, for the most part is that ethics is something the student is supposed to have and little is

actually done except by indirection to enhance it. Nevertheless, it remains a powerful objective. Any program without it would be considered unacceptable. Perhaps the ethical development of the student after all is a university-wide undertaking and the graduate division can serve the end best by cooperating in the broader program.

Varied reactions were received to the question: What is new (i.e., about the last five years) in your program? Five years pass quickly and unless there is a special committee to which is assigned the continuing responsibility for the development of the Master's degree, little may be done. While some schools, for reasons of their own, have made no changes during the last five years, most institutions are in a state of study, revision, leveling up and conducting self-evaluation. The Admission Test for Graduate Study in Business ranked first in consideration. Frequently the thesis requirement was not yet satisfactory and experimentation or substitution continued. As growth in numbers of students accelerated, faculty additions received added attention and concurrently an increase in graduate offerings. Mathematics, data processing, human relations, research methodology, public administration were among those added. Core courses were strengthened also.

Examination procedures have been improved and integration and the case method has moved firmly ahead. Those which had the rule of "pass all or none" tended to change it to "if fail one, may take that examination a second time." To improve performance in course work, study loads were reduced. Some felt that all general and special undergraduate prerequisites should be completed before any study for graduate credit could be allowed. Proficiency or at least improvement in both written and oral expression received increased emphasis. The principal changes reported of the past five years are in the newer and possibly weaker programs which have been materially improved. In general, the whole area of the Master's program has increased in stature.

The purpose of the third question: What developments do you anticipate in the near future (during about the next five years) in your program?—was to measure the Master's degree of today against the outlook of the predictable realizable future. Some schools thought that their programs were good and contemplated no change. Others commented as follows:

1. The time has come to raise admission requirements to a still higher level. Higher selectivity would yield a uniformly better minimum product and would help to cope with ever-increasing enrollments.
2. Students with non-business undergraduate backgrounds of study should be given more consideration. Many of these are in other areas of the same college or university. They constitute a proven source of candidates who can receive a great deal of benefit from the Master's degree in business. A 3-2 or 4-1 arrangement might be desirable. A general business major with few electives might be preferred.
3. Prerequisite courses for the most part have not changed a great deal for some time and should be tailored to fit and should take less time to master the essentials in line with the objectives of individualized programs.
4. The oral examination tends to be inadequate, particularly the comprehensive type. Written examinations should be improved.
5. Arrangements should be made to extend internship or experience plans on the graduate level to other areas

than the one or two of proven value.

6. A single degree title is not suited to the contrasting needs of candidates. For example, the M.S. degree could be used for a year of specialization built on general background or special degrees like Master of Public Accounting could be offered. Not all schools should attempt the M.B.A., but for those which do it should carry similar fundamental (though not identical) requirements. It should not be a catch-all degree.
7. Graduate programs should be designed to develop a continuing interest and participation in education after receiving the degree. The school should take the initiative and offer some form of service. It has been suggested as a start that a small fee be added to the diploma fee to bring copies of studies, etc., published the following year to the alumnus. Conferences, special invitations, faculty contacts are other devices.
8. A few schools plan to offer the Ph.D. or the D.B.A. They are working consistently toward that goal.

It seems fitting to add two observations to what has already been said. Some schools make effective use of business advisors in connection with their graduate program. These individuals occupy positions of responsibility and are willing to assist the schools in developing sound plans, in providing a laboratory of experience through internship for students and faculty, in appearing in lecture series on appropriate subjects, in providing scholarships and other financial assistance. These associates or advisors are given a proper place in the school bulletin with photographs and brief descriptive material.

Public relations are emphasized in the Master's program; business has made great strides in that direction. Do the schools practice it themselves and, if so, is it considered a specialized function of a Public Relations department and left to the personnel of that department to implement it? We are happy to report to the contrary. The high percentage of cooperative replies speaks for itself and the personal comments provided created goodwill even in such a routine and time-consuming matter as a three-page inquiry. These schools consider even such a small contact as deserving priceless courtesy and "every good wish." To all of you, our most sincere appreciation and thanks.

DISCLOSURE: WHAT NEXT?

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THE primary reason for analyzing quantitative data is to secure clues as to *future* performance. The analyst's task is one of comparison—comparison of changing overall economic conditions, comparison of industries, comparison of firms within industries, and comparison of specific company financial data through the years. Analysts look for trends and changes in major items. Thus financial reports should be oriented toward facilitating comparisons.

The Committee on Corporate Information of the National Federation of Financial Analysts Societies has been studying specific industries and has constantly sought more uniformity in reporting to facilitate comparisons. This is one of the primary reasons why the Committee has approached the problem of disclosure from an individual industry point of view. Included in the studies already made are the chemical, paper, banking, oil, electrical utilities, aircraft manufacturing, insurance, and drug industries.

In all of its reports the Committee has stressed the point that corporate management should give more weight to the importance placed by the financial community on the comparison of similar enterprises and, "in cooperation with other managements within an industry, should see to it that financial figures are comparable or that the necessary supplementary information is supplied so that the analyst can make them comparable."[1]

Before surveying the areas where improvements in disclosure can be made, certain facets of the reporting problem which have been handled fairly well may be cited. Progress has been achieved in the following areas: comparative statements, consistency, basis of consolidation, isolation of non-recurring items, description of major changes in accounting policies.

"Valuation" techniques are usually described in annual reports. The detail of many such descriptions, however, are often too sketchy to be termed adequate. For example, what portions of total inventories are on LIFO? What specific *costing* procedure is being used with a "lower of cost or market" technique?

A previous article, "Disclosure: 1957," emphasized that financial analysts are the major consumers of the published data issued by management with the aid of accountants.[2] The drafters of published reports must remember that the analyst is faced with the task of comparison of results between years and between similar firms. The analyst is not so unsophisticated that he thinks all firms in all industries should be forced to adopt inflexible accounting policies and rigid uniformity. But he realistically desires sufficient information so that he may carry out his task of comparison without the need of making arbitrary assumptions concerning a firm's accounting procedures and policies.

AREAS NEEDING ATTENTION

From the viewpoint of the security analyst the income statement dwarfs the balance sheet in importance. Future earning power is the major consideration. Past earnings performance is dissected in order to delineate trends. The analyst is not nearly as "single-figure" minded (earn-

[1] E. Linwood Savage, Jr., "Conclusions Regarding Annual Reports," *Analysts Journal* (February, 1954), p. 54.

[2] THE ACCOUNTING REVIEW, October, 1957, pp. 598–604.

ings per share) as he often leads people to believe by his remarks and articles. Instead the analyst begins with the sales figures and methodically moves through the remainder of the statement. Besides sales the major components which command attention are cost of goods sold, research, long-term rentals, depreciation, non-recurring items, net "operating" income, income taxes, and net income.

Sales

Once a major criticism, but one that now applies mainly to "over-the-counter" companies, is the deliberate omission of sales figures in the income statement. The lack of gross revenue figures "effectively bars the analyst from ascertaining most of the important quantitative factors on which security values hinge."[3]

The analyst's interest in sales figures extends beyond the annual total revenue. In addition to sales breakdowns by quarters, there is a need for breakdowns by other classifications. Dealing with one lump-sum sales figure is not enough with respect to the analysis of the modern corporate Goliath. The mammoth, multiproduct firms of today's business environment necessitate the securing of sales by divisions, products, geographical distribution and consuming industry. Especially important in this area is the per cent of sales coming from foreign markets.

The tendency to divide sales into major components is already evident in a few scattered annual reports. As business becomes more complicated and diversified, such breakdowns are an aid to the comprehension of the nature of a company. E. Linwood Savage, Jr., when chairman of the Analysts' Committee on Corporate Information, commented:

> No specific preference for a particular type of breakdown can be given for annual reports in general—it all depends. We suggest that management try to provide us with the type of breakdown that will be most helpful to us in our job of appraising the possible effects of outside developments on individual companies. It is important for us to know, for example, that less than 16% of Eastmen Kodak's sales are cellulose fiber, in estimating the effect of the current slump in the textile industry on that company's earnings.[4]

Analysts nearly always attempt to estimate such sales breakdowns in their written reports. The following excerpts from an analytical report on the E. I. duPont de Nemours & Company illustrate the exhaustive extent of analysts' sales breakdowns:

> As the largest chemical company in the world, duPont's operations straddle the entire fields of organic and inorganic chemistry. . . . Its business is necessarily subject to the ups and downs of general chemical operations, but duPont concentrates on . . . chemicals with higher than average profit margins, which require not only introducing new chemicals but also having the decisiveness of abandoning items which develop lower than average profit margins. In carrying out this policy, duPont in 1953 discontinued three activities—alcohol by fermentation, lithopone pigments, and aromatics for cosmetics. . . .
>
> In analyzing duPont, one can isolate some of the Company's major activities and determine the position of duPont in individual fields, making possible an estimate of the contribution of the particular chemicals to total sales and then determine the outlook in 1954 for the respective activity. . . .
>
> (At this point an estimated breakdown of total sales into 23 components in dollars per product class is presented.)
>
> On the following pages we discuss by individual products the position of duPont and the probable outlook of the particular channels of activity. . . .[5]

With such information analysts can then better compare trends within companies and among and between the breakdowns of the firm's principal competitors.

Galanis points out that the condensing of all operating revenues into a single

[3] J. M. Galanis, "Shortcomings of Financial Statements from the Security Analyst's Viewpoint," *Analysts Journal*, November, 1947, p. 37.

[4] Savage, *op. cit.*, p. 53.

[5] In this and in the following excerpts from analysts' written analytical reports, sources are withheld by request.

figure, where the total includes royalty and license income, resale items, and important miscellaneous income items can be definitely misleading when the company is compared with others in the same industry.[6] For example products purchased for resale by a manufacturing company are normally expected to entail narrower margins of profit. Where such resale items comprise a considerable portion of sales, the over-all profit margin may be considerably smaller than for other companies in the same field that have little or no resale business.

Finally, the analyst desires that any material amounts of revenue from dividends, interest, licenses, and royalties be segregated because this type of revenue has frequently tended to evaporate (i.e., patents expire and interest rates drop).

Research and Development

The analyst's intense interest in research and development activities typifies his "future-orientation." New products and processes obtain a major share of his attention and a substantial share of the total probing by an analyst beyond the confines of the annual report.

The analysts are interested in alert, progressive management. Research and development activities give clues with regard to managerial efforts to maintain or enhance the competitive position of the firm. Jeremy C. Jenks expresses the analyst's attitudes as follows:

> Perhaps next to a wise management, the most important asset that business can have is a well-organized staff of scientists, searching aggressively for new products and better processes. It is no accident that the most rapidly growing industries are the ones that employ the largest number of technically trained men in their research, engineering, and related departments.[7]

Thorough inspection of research and development outlays includes interest in the total amount, the amount related to sales, the products which show potentialities, and the research program and personnel as compared with competitors.

The following passages from an analysis of duPont illustrates the type of thinking that prevails among analysts:

> The experience of duPont has been to put approximately $3.00 into plant for every $1.00 into research. We estimate that in 1954 research and development expenditure will be $57–60 million—including $10–12 million in basic research. . . .
>
> The duPont philosophy on research runs along the following lines. Research requires patience, foresight, experience. From 10–20 years may elapse from the first experiment to a commercially profitable product. About one in every twenty projects pays off. The mathematical odds as far as dollars put into research are about 1 in 5; i.e., $1.00 riding on a successful product for every $4.00 "down the drain." . . .
>
> DuPont's record shows that the larger its sales, the higher *proportion* it *can* put into research. In other words, in 1952 with sales of $1,600 million, the research budget was $52 million; if duPont, according to President Greenewelt, had been divided into two companies, with sales of $800 million each, the individual research budget would have been considerably under $26 million. We venture the guess that a dollar invested in research by . . . duPont has on the average greater effectiveness than the same dollar put into research by a smaller and less skilled organization.

The following are three excerpts on the subject of the adequacy of annual reports taken on Corporate Information of the National Federation of Financial Analysts Societies:

> *1. Chemicals*
>
> The greatest inadequacies in this group appear to be the failure to give a breakdown of sales by divisions, sales by industries served, the volume of foreign business, and total research expenditures. The importance of these items for the analyst should be obvious.
>
> *2. Paper Industry*
>
> The way in which research was handled was particularly weak. What comments were made were very general in nature. In addition, there

[6] Galanis, *op. cit.*, p. 38.

[7] Jeremy C. Jenks, "Projecting Corporate Earnings," *Analysts Journal*, February, 1953, p. 99.

was virtually no specific mention made of work being done on the development of new products or new processes that might be forthcoming either to increase sales or to reduce costs. Likewise, there was no mention of the annual expense of the research activities undertaken by individual companies.

3. Drug Companies

It is highly desirable that the drug companies provide stockholders with more information regarding research than they usually do. Expenditures should not only be stated but also broken down into the different categories as far as possible, i.e., fundamental research, development research, etc. This would permit the reader to form a pretty clear opinion as to how the company is spending its research money. The various areas being explored and the objectives should be discussed. The number of research personnel, including educational background and other qualifications, should be indicated.[8]

Of course, "trade secrets" can be a convincing reason for scanty disclosure concerning research. This writer wonders (a) how much really *may* be disclosed without hurting a company's competitive position, and (b) how much danger there is of misinterpretation on the part of analysts. For example, the following questions arise concerning the above analyst requests of the drug companies:

1. How are fundamental and development research defined and interpreted? Analysts want this information largely to discover the "research philosophy" of the firm. Does the company lead the way into profitable markets or does it concern itself with minor changes in products and processed?
2. How thoroughly may the companies discuss the various research areas being explored without tipping their hand to competitors?
3. What are "research" expenditures? The classification of a maze of outlays by individual companies can have a substantial effect upon the total research costs reported. Comparisons need to be made with extreme caution. Just because a project is called research and is very expensive does not guarantee useful or valuable results. Specific projects being developed would appear to be more important than the outlays themselves.
4. In terms of results cannot one good research brain @ $30,000 per year be worth considerably more than four @ $10,000? Quality of personnel is a paramount consideration. How can this be measured?

In summary, analysts want research information. Since they seldom get it from annual reports, they rely on a great variety of their other usual sources. But in most cases they do secure it! Why then, cannot the annual report offer a more thorough presentation of research data?

Long-term Rentals

One of the salient shortcomings of present-day financial reporting is the scanty information concerning long-term lease arrangements. Every analyst who is concerned with industries where long-term leases are significant expressed his dissatisfaction with corporate information in this respect.

The position of the analyst is well summarized in the following statement by Savage:

> Another piece of information not usually available to us, unless we consult 10K reports to the SEC, is the amount of rentals paid. This may not be significant in many cases, but, where it is, it should not be necessary for us to go to the expense and inconvenience of securing the information from reports made to governmental bodies.[9]

[8] Committee on Corporate Information, "Report on Adequacy of Annual Reports of the Chemical Industry," *Analysts Journal*, May, 1950, p. 68. "Report on Adequacy of Annual Reports of Paper Industry," *Analysts Journal*, May, 1951, p. 146. "Suggestions for Improvement of Drug Company Annual Reports," unpublished mimeographed report, June, 1954, p. 4.

[9] Savage, *op. cit.*, p. 54.

The rash of sales and lease-back transactions which has taken place in the past decade has forced analysts to be exceptionally careful in comparing firms in industries where such financial arrangements are widespread. The retailing industry is the primary example. The result of such arrangements has been to create larger rentals in relation to business done, and in good part to replace the older type of bonded debt, which was visible on the balance sheet, with long-term lease obligations which are relatively invisible.

Of course, analysts attempt to measure the fixed charge coverage because the high level of rentals assumed in prosperous years might become overwhelmingly oppressive if earnings decline. Furthermore, analysts want to know about cancellation clauses so that a determination may be made of possible maximum rentals during poor years.

A parallel might be drawn between the disclosure of interest and sinking fund requirements on funded debt and the disclosure of rental requirements on long-term leases. Few accountants or managers would attempt to withhold such elementary information as debt-service obligations, yet a good many firms continue to be needlessly stingy with similar significant data concerning long-term leases.

In summary, analysts seek more disclosure about the amount of annual rentals, the terms of the leases, and any other important obligations assumed or guaranteed in connection with leases.

Foreign Operations

Foreign operations contribute in substantial proportions to overall sales in many industries.[10] The accounting practices with respect to consolidating foreign subsidiaries vary considerably. In general, the state of disclosure concerning foreign operations is woefully inadequate. Analysts in general feel that there is little reason why firms should not furnish at least the same essential data regarding foreign operations that is currently given concerning domestic operations. That is, firms should publish details such as sales, expenses, income taxes and total investments in foreign operations.

What format should be used in the presentation of such information? Analysts tend to favor consolidating all foreign subsidiaries on the same basis as consolidations of domestic subsidiaries. In addition, a detailed picture of the foreign operations themselves should be drawn either with separate formal statements or by means of footnotes.

An illustration of the basis of consolidation and presentation which was welcomed by analysts is illustrated by the following excerpt from the 1953 annual report of the Burroughs Corporation:

> As in prior years, the statement of income includes the income and costs of all subsidiary companies. The net income of subsidiary companies operating outside the U. S. and Canada, less dividends paid to the parent company, has been deducted in arriving at "net" income for the year from operations in the U. S. and Canada, including dividends received from foreign operations.[11]

It is noteworthy that in the case of Burroughs, as in most other cases, the analyst is forced to contact sources other than the annual report to obtain a breakdown of sales and expenses between domestic and foreign operations.

Depreciation

Depreciation accounting and reporting has progressed a great deal. However, the variety of optional approaches now allowed by the Internal Revenue Code, while probably theoretically acceptable, is giving the analyst additional headaches.

[10] Examples of industries having sizable foreign activities include motion pictures, office machines, chemicals, rubber, mining, fountain pens, tractors, and machine tools.

[11] Burroughs Corporation, *Annual Report, 1953.*

Analysts feel that depreciation is "something special" because it represents a charge against revenue that does not involve a current outlay of funds. They tend to relate depreciation charges to capital replacements or the repayment of long-term debt which arose from prior capital outlays. Thus they think of depreciation amounts as "funds." Whenever depreciation charges are relatively important in the operating picture, they are analyzed with great care.

The Siamese problems that disturb the analyst the most about depreciation reporting are (a) the lack of information concerning overall depreciation policy and especially breakdowns between "normal" depreciation and "abnormal" depreciation, and (b) the difficulty of comparing companies within industries because of the different accounting policies and procedures employed.

Analysts commonly complain that companies neglect to divide their yearly depreciation charges between "five-year" depreciation and the normal depreciation charges. But, even if the amounts of "emergency" facility costs charged to operations are revealed in regard to the five-year write-offs, the analyst still must speculate as to what part of such an amount is "normal." That is, are the useful lives of "emergency" facilities seven years, ten years, twenty years, or fifty years?

The difficulty of comparing companies within industries is reflected by the following excerpt from the Committee on Corporate Information's proposals for improvements of oil companies' annual reports:

> . . . the principal observations and recommendations are as follows:
>
> 1. A more uniform system be adopted for reporting annual charges for depreciation, depletion, retirements, and exploration. Seldom do two companies report these items similarly. The result is that, when attempting to compare cash income or gross operating profits of two or more companies, it is often impossible to obtain comparable figures.
>
> It is recommended strongly that as a minimum the following three items be shown separately in the income statement:
>
> (a) Exploratory costs—including geophysical and geological expenses, dry hole costs. . . .
>
> (b) Amortization of intangible drilling costs.
>
> (c) Depreciation and depletion.
>
> In a footnote, account for differences between the above items and those taken for tax purposes.[12]

An analysts subcommittee on aircraft industry annual reporting included the following among its recommendations:

> . . . the following data would be useful:
>
> . . . an analysis of the plant account indicating dollar investment in plant subject to normal depreciation and that subject to rapid amortization indicating the amount of accelerated amortization, if any, charged to the year's operation.[13]

Many analysts offer analyses on three bases in cases where accelerated amortization is material in amount. First, they present income as reported by the company. Second, they adjust income to a "normal" basis by adding back estimated excess depreciation.[14] Third, they add back all depreciation charges to the net profit after taxes figure and compare "cash earnings" throughout the industry.

The following excerpt from a written analysis of The Aluminum Company of American (Alcoa) exemplifies the type of thinking which analysts apply to the problems of accelerated amortization:

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[12] Committee on Corporate Information, *Reports of National Committees for 1953* (New York: New York Society of Security Analysts, Inc., 1954), p. 15.

[13] Sub Committee on Aircraft Industry Annual Reporting, "Aircraft Industry Annual Report—1953," a mimeographed report for private distribution, April 7, 1954, p. 3. Similar comments were also found in reports of Sub Committees on annual reports of the Drug Companies, the Chemical Companies, and the Paper Companies.

[14] An investment organization treats Dow Chemical earnings as follows:

Earnings Reported	XXXX
Add: Excess depreciation after 50% tax	XXXX
Earnings including excess depreciation	XXXX

Earnings were $4.71 per share. This was after excess profits taxes of $0.83 a share and accelerated amortization charges of $3.38 (before taxes) per share. In the absence of the special amortization charges and assuming a tax rate of 46% (Alcoa's normal and surtax rate last year) the company apparently would have earned between $6.80 and $7.00 per share. Earnings through 1959 will be subject to heavy amortization charges reaching a peak of about $5.00 per share (pretax) in 1955. Thus reported earnings during this period will not be a true representation of the company's earning power. As to 1954, we would expect earnings to exceed last year's $4.71 per share, although rapid amortization charges will increase to about $4.65 per share (pretax).

As mentioned above, many analysts tend to use a "cash earnings" basis rather than a "reported earnings" basis in the valuation of stocks in the petroleum, chemical, and aluminum industries. This approach has been adopted because of the widespread variations in depreciation policies plus the difficulty of comparing similar firms which have invested in a large proportion of fixed assets at different price levels. For example, Dow Chemical Company has mushroomed in capacity since the war. Its investment in plant and equipment was largely made in the postwar years, whereas Union Carbide and duPont had made substantial investments prior to 1941.

The following passage from the Alcoa analysis illustrates the problems of comparison in these types of industries:

> The market appears to be valuing all of the aluminum producers' stocks on the basis of cash earnings rather than on reported earnings. All are selling at a high price times reported earnings except for Reynolds which reports its earnings on a different basis from the other companies with respect to accelerated amortization and income taxes. It has adopted the policy recommended by the American Institute of Accountants which has the effect of overstating current earnings as compared to those of the other aluminum producers. . . .
>
> On a cash earnings basis, Alcoa and Aluminum, Ltd., at 7.0× and 6.7×, respectively, command a much higher ratio than either of the other producers, reflecting their favored position in the industry. It is interesting to note that Kaiser's cash earnings are believed to be about the same as those of Alcoa (around $11.00 per share), yet Alcoa at 75 is almost 2½ times Kaiser's current market price of 32.

In summary, disclosure requirements should include: (a) thorough breakdown of fixed assets by classifications together with a short description of the depreciation accounting policies being applied; especially helpful would be a description of the impact upon income of the options now approved for income tax purposes; (b) the estimated useful lives of emergency facilities; (c) the total amount of excess amortization; and (d) the differences between total depreciation charges and normal depreciation charges for each major class of emergency facilities. If the analysts are furnished with such data, they should be able to apply such information to the specific comparative problem at hand.

Capital Expenditures

Analysts attempt to estimate the increments in future sales and in profits which probably will flow from current and planned expansion. They are very much interested in capital expenditures for the following reasons:

1. An effort is made toward a type of lag correlation of capital expenditures with future returns.
2. Capital spending is regarded as one of the best reflections of the intentions of management toward product development, product diversification, process improvement, and cost control. In this regard the wisdom of the management is judged by its recent performance with capital expenditures. Such recent performance is evidenced primarily by the relationship of sales, earnings, and dividends to capital outlays.
3. Obviously, company financial policies are intertwined with management's plans for capital expenditures. Ana-

lysts invariably scrutinize the impact of capital outlays upon the working capital position and capitalization structure.

Since recent external financing has been largely in the form of debt, analysts always estimate and relate debt service outlays to projected earnings. When funds for financing have come from profitable operations, analysts are vitally concerned with prospective effects upon dividend policy. Obviously, if management has adopted the policy of internal financing, the dividend pay-outs in relation to earnings tend to suffer.

The importance of disclosure of the details of the working capital position in relation to budgeted capital expenditures is pointed out by the Financial Analysts Societies with respect to the annual reports of oil companies:

> Discuss frankly the working capital position in relation to budgeted capital expenditures, particularly where there are prospects of new financing. Of the three major new financings undertaken in the past year by Socony-Vacuum, Standard Oil of Indiana, and Sinclair, none made any mention in its 1951 report of the possibility that new financing was contemplated. Standard Oil of Indiana's report implied that no financing was anticipated.[18]

Funds Statements

Analysts are very much interested in sources and applications of funds. If funds statements are not included in corporate annual reports, analysts either draft makeshift funds statements or analyze comparative balance sheets in such a way that their written words amount to a funds flow analysis. Almost every written analysis contains an estimate of sources and applications of funds over the past five to seven years, and an estimate of fund flow for at least one year in advance.

The analyst emphasizes the flow of funds because it offers the clearest quantitative insight into the financial management "habits" of the firm and the future outlook for dividends.

The "fund flow" thinking of the analyst is exemplified by his treatment of fixed assets. The balance sheet values of fixed assets are all but ignored. Attention is concentrated upon capital expenditures over the past five to seven years and, even more important, upon planned capital expenditures. The sources of the funds for capital expenditures and for working capital requirements are also estimated. As mentioned above, the probable impact of capital expenditures on financial position, sales, earnings, and dividends is invariably discussed by analysts in their written reports.

Inventories

The first paramount consideration with respect to inventories is simply that the revealing of the mere basis of valuation is not adequate disclosure. The nature of each of the bases of inventory valuation differs markedly with the method and procedure used and the segment of the inventories with which it is concerned. Inventory figures, like so many other figures in accounting, are general, pliable estimates. The figure which appears in the financial statements is only one of several alternative dollar values attributable to the quantities in the inventory.

From the analyst's point of view, then, it seems that the minimum requirements for disclosure with respect to inventories would embrace the following essentials:

1. Inventories should be broken down by major classes, by dollar amounts, and by methods of valuation.
2. There should be a brief description of the details of the valuation methods employed.
3. Where feasible, physical quantities should also be disclosed. In this way price and quantity analysis may be facilitated. Several analysts expressed

[18] Committee on Corporate Information, *Reports of National Committees for 1953*, *op. cit.*, p. 15.

special desire for disclosure of physical quantities.

4. Where last-in, first-out, base-stock, and similar methods of valuation are used, an estimate of current replacement cost should be disclosed.
5. Where inventory reserves are used, full disclosure of the following points is desirable: their origin, their function, their classification, and their yearly changes and adjustments.

The application of the above standards of disclosure plus consistent adherence to a given method and procedure of inventory valuation should give the analyst ample opportunity to make any adjusting calculations he feels are necessary in order to develop comparability between companies.

The Distant Future

Management tends to find analysts' requests for the following types of information particularly odious:

1. Reveal fixed and variable costs for the operation, so that the reader may get a better idea of what profits could be at various levels of activity.
2. Regarding capital expenditures, indicate the criteria for these investments as well as dollar amounts. What range of net return may be reasonably expected on new expenditures?

Many analysts tend to "ask for the moon." By this process they hope to get a star or two.

SUMMARY AND CONCLUSION

The following points should be kept in mind in thinking about disclosure in published reports:

1. Published data are primarily for the use of investors. Complete disclosure, available to everyone, is a fair and efficient way of serving all interested parties.
2. Professional security analysts represent, dollarwise, probably a very large percentage of existing investment capital. That is why reports should be oriented toward fairly sophisticated investors—they are the real users of the information.
3. Analysts' opinions and procedures should be considered in the evolution of corporate reporting. Ideally financial statements must be constructed for maximum usefulness. Judgment as to usefulness is made ultimately by the user, not the producer.
4. In accounting, as in every phase of business activity, there is an ever-widening and everlasting need for continued improvement. Managers and accountants should remember that analysts must examine hundred or thousands of financial statements yearly. Thus accountants have a standing obligation to improve their products.
5. Specific troublesome areas of disclosure include lack of information concerning sales breakdowns, leases, research, depreciation, foreign operations, capital expenditures, funds statements and inventory presentations.
6. For the most part analysts are very intelligent and sensible people. They know their business and they know what they need. It is doubtful that firms are justified in withholding or adjusting certain types of information because the company representatives feel that disclosure would be misleading or subject to misinterpretation.
7. When accountants are involved with issues of disclosure where company stock is publicly held, they might point out that more generous disclosure could easily have favorable effects upon the attitudes of the financial analysts who influence the market price of company shares.

USEFUL FORMULAE FOR DDB AND SYD DEPRECIATION

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SHORTLY after the Internal Revenue Code of 1954 became law we were presented with a number of excellent articles in this and other journals about the behavior of depreciation expense and reserves under the double-declining-balance and the sum-of-year's-digits methods. We quickly learned to make the annual depreciation calculations and gained a general knowledge of what the methods could do for owners of fixed assets and what it could do to the governmental revenues.

However most of us accountants have long since allowed our mathematics to grow rusty while we devoted our efforts to other matters. Therefore, when the tables prepared as examples did not fit the needs of our specific problems we have had to arrive at expense provisions and reserve balances far later years by successive arithmetic. This article sets out some formulae that will enable the non-mathematician accountant to compute such future provisions and reserve balances directly.

D.D.B.

Depreciation by the declining balance method is allowed at any rate that does not exceed twice the straight line rate. Since in practical application the maximum tends also to become the minimum, we can confine the discussion to the maximum. Under the straight line method the annual depreciation, D, is equal to the depreciable cost, C, divided by the estimated life, N. In formula fashion:

$$D=\frac{1}{N}C.$$

Twice the rate is allowed in the double declining balance method, so the rate becomes $2/N$. This is applied not to cost, C, but to the remaining balance, B.
Thus,

$$D=\frac{2}{N}B.$$

The trick is to determine B without performing the successive calculations for each year from the beginning. B, however, can be determined directly from the formula

$$B=C\left(1-\frac{2}{N}\right)^{x}$$

where the terms B and C are as previously defined and X is the number of years of life expired. Depreciation for the following year is

$$D=\frac{2}{N}C\left(1-\frac{2}{N}\right)^{x}.$$

Note to C.P.A. candidates:

The solution to the D.D.B. problem was computed with the aid of tables of logarithms. Since these are not permitted at the examination, you may find these computations too tedious unless you use a shortcut. The work is then reduced but by no means eliminated. You will find it easiest not to convert to decimals. Change the $1-\frac{2}{18}$ to $\frac{16}{18}$ and to $\frac{8}{9}$. Then raise both 8 and 9 to the thirteenth power before dividing. Raising to the thirteenth power sometimes can be made easier by using the rule that states that adding exponents results in multiplying the numbers. For example to find 8^{13}

$$8^1\times 8^1=8^2$$
$$8^2\times 8^2=8^4$$
$$8^4\times 8^4=8^8$$
$$8^8\times 8^4=8^{12}$$
$$8^{12}\times 8^1=8^{13}$$

Five multiplications are necessary instead of twelve. The question of time saving revolves about whether the second, third, and fourth multiplications are more difficult than the ten avoided.

Let us illustrate with a small example. An asset cost $10,000 at the beginning of 1955 and was expected to last eighteen years. We wish to know the depreciation that will be allowable in 1968 if we are using the double declining balance method without switch to straight line. For our formula C will be the $10,000, N the 18 years of expected life and X the 13 years expired to the end of 1967.

$$D=\frac{2}{18}\ \$10,000\left(1-\frac{2}{18}\right)^{13}$$

$$=0.11111\ \$10,000\ (0.88889)^{13}$$

$$=0.11111\ \$10,000\ (0.21628)$$

$$=\$240.31$$

S.Y.D.

The sum-of-years-digits method tends to similar but simple formulae. The formulae are shorter if we use L, the number of years left of the life instead of X the number of years expired. The X plus L equal the whole life, N. The undepreciated balance, B, at the beginning of any year is

$$B=C\frac{L(L+1)}{N(N+1)}.$$

L is the number of years of life left from the beginning of that year. Depreciation during that year, D, is

$$D=C\frac{2L}{N(N+1)}.$$

Using the problem we had before

$$D=\$10,000\ \frac{2(5)}{18(19)}$$

$$=\$10,000\ \frac{10}{342}$$

$$=\$292.39$$

If we happen to know B, as we would under successive steps, the formula for D becomes extremely simple:

$$D=\frac{2}{L+1}\ B$$

Asset Year vs. Fiscal Year

All of these formulae give values of the undepreciated balance at the end of a specified number of full years of asset life. Depreciation is also based on the asset year. When calculations must be made for company fiscal years not exactly coinciding with asset years, an additional step is necessary unless a set of more complicated formulae is to be used. Let us assume a company fiscal year ending December 31 and that the asset was acquired on March 31. To determine the undepreciated balance December 31, 1965, use the formula to compute undepreciated balance on March 31, 1965. Compute depreciation for the asset year ending March 31, 1966. Subtract three-quarters of that depreciation from the March 31, 1965 undepreciated balance, and the result is the undepreciated balance December 31, 1965. You will note the assumption used in tax calculations that depreciation *during* the year is straight line.

Uses of Formulae

These formulae may be used, as pointed out previously, for calculating isolated items without the necessity of calculating the intervening items. The auditor can use them to test depreciation provisions computed by his client on a year by year basis. The tax planner can use them to see just what depreciation he will have left in later years. Many other similar applications will occur to the reader.

In addition to these computational uses the formulae may be used for theoretical computations of behavior in the "general case." Since the formulae are applicable in all instances, general rules may be

proved. It is commonly stated that shortly after the mid-point of life it is advisable to switch from D.D.B. to straight line depreciation. To base this statement on observations of a number of specific examples is dangerous.

Such observations do not prove the behavior in all possible circumstances. These formulae do prove, for all possible cases where the scrap value is zero and the expected life is an even number of years, that both D.D.B. and straight line (based on remaining balance over remaining life) provide the same depreciation in the year immediately following the midpoint. The second year after the midpoint then D.D.B. depreciation is smaller than straight line, so this is the year to change. When the life is an odd number of years, the midpoint comes at the middle of the middle year. The next is the year to change from D.D.B. to straight line. Similar use of these formulae will provide the vigorous proof of many other relationships.

NEW COST ACCOUNTING CONCEPTS

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In an activity such as Cost Accounting in the modern dynamic industrial age the term "new" is a relative term. Many aspects of this subject are continually changing. These changes involve both the requirements by management and the procedures employed to meet those requirements. This study presents a discussion of the "concepts" of cost accounting and not the "procedures." It involves the requirements of management and government agencies because these requirements set the pattern for cost accounting.

Within the last few years there have been many groups interested in the problem of cost accounting. There have been many special research bulletins of the National Association of Cost Accountants; there is a special committee of the American Accounting Association; the English magazine *Accounting Research* has had several articles bearing on the subject; and the *Journal of Accountancy* has devoted space to the subject.

As cost accounting is closely related to cost control and the planning of business enterprises, other academic disciplines have shown more interest in the problem in recent years; articles written by economists, statisticians, and engineers have appeared in increasing number. The economists are related to the subject through their discussion of the economic situation of business firms operating under different cost conditions and different market situations. The statisticians are interested in accounting as it relates to the application of statistical techniques which may draw more useful conclusions from large quantities of data. Engineers are interested because of the physical plant being used and because of the implications for efficiency inherent in new developments such as "automation."

Most of the references in this study will be to manufacturing functions, but the concepts are similarly applicable, in differing degrees, to distribution, selling, and other functions of business as well as to government and to nonprofit organizations.

Purposes of Cost Accounting

There are several main purposes of cost accounting:

1. Income determination, with the cost of goods sold and the inventory valuations being the main results of cost accounting.
2. Balance sheet presentation, with the inventory items, the balances in the prepaid and accrued expense accounts and the residual value of fixed assets being related to cost accounting.
3. Control of cost by management made possible by having available adequate data to judge performance quickly and also having data for future planning.

Mr. John G. Larson has stated that, in terms of time, there are three kinds of costs involved in carrying out the stated purposes.[1]

1. Past costs for profit determination
2. Present costs for cost control
3. Future costs for planning

In an attempt to obtain data for these purposes, the profession has developed over a period of time procedures involving variations of:

1. Job cost
2. Process cost

and in either of these there may be the use

[1] Larson, John G., "Utilizing Past, Present and Future Costs," *N.A.C.A. Bulletin*, February, 1952, p. 695.

of "standards" for specific operations of each product or cost center of the business. Further, there have been developed procedures for describing variable and fixed costs and for sorting the "so-called" semi-variables into either "variable" or "fixed" for the purpose of computations.

In 1947, Mr. Theodore Lang wrote an article entitled "Concepts of Cost, Past and Present." He did not forecast the future but helped explain why cost accounting is where it is today. He traced the early attempts at accumulating costs and dividing by the number of units to obtain "unit" cost and concludes that "actual costs are really accidental costs and, therefore, strangely enough not true costs as the term is understood today."[2]

The shortcomings of actual cost led to the development of standard costs but there is a question as to whether the profession would now agree wholeheartedly with the conclusion, made in 1947, that "The cost accountant has come a long way, gradually abandoning faith in an actual cost and going wholeheartedly over to the idea that a standard cost is really the true cost."[3]

Among the "new" concepts of cost accounting are *direct* costing, *marginal* costing and variations of these two concepts on actual and standard bases.

Direct Costing

Direct costing has been defined by Mr. Nielsen as a system in which

> ... direct labor and direct material costs are identified with products. Any other costs directly and conveniently traceable to products are identified with them also ... other items of manufacturing expense are considered to be over-all costs of operation in the period of occurrence.[4]

The development of this system is shown in the N.A.C.A. research bulletin entitled "Direct Costing." The accumulation of variable costs separate from fixed costs permits preparation of analytical statements directly from the records rather than from an analysis of variances, as in the case when fixed and variable components are mixed. Part of the confusion in terminology has arisen in that what is called "direct" costing in the United States is called "marginal" costing in Great Britain.

The bulletin also contrasts "direct" costing with "absorption" costing. "Absorption" costing is a term used to cover the various conventional methods whereby fixed costs are applied to production and included in inventory.[5]

Mr. Hepworth, a critic of the direct costing system, defines it as a "technique whereby the cost of a product is restricted to the inclusion of *variable* manufacturing costs with fixed manufacturing costs being considered as period expense. It must be noted that this is not the same concept which regards only direct or prime costs as product costs, all overhead or burden costs being considered as period expenses."[6]

Thus, the older system of allocating all the overhead to the product or to each cost center is not to be used in the "direct" costing system. It also must be carefully noted that the concept of direct labor plus direct material (the sum known as prime costs) is not the "direct" cost in this system. "Full" cost has been known as "prime" cost plus "overhead."

Up to this point there has been no distinction between average and marginal cost, whether "full" or "direct." The discussion of "cost at the margin," which is perhaps a better term than "marginal cost" will be undertaken later.

The accumulation of direct costs, or

[2] Lang, Theodore, "Concepts of Cost, Past and Present," *N.A.C.A. Bulletin*, July 15, 1947, p. 1377.

[3] *Ibid.*, p. 1389.

[4] Neilsen, Oswald, "Direct Costing—The Case 'For'," The Accounting Review, January, 1954, p. 89.

[5] N.A.C.A., "Direct Costing," *Research Series #23*, April 1953, p. 1082.

[6] Hepworth, Samuel R., "Direct Costing—The Case Against," The Accounting Review, January, 1954, p. 94.

variable costs as they are called by the economists, is very valuable to management for internal reports on current operations. The variable costs are those that each manager of a segment of a plant (cost center) can control, and for this reason the system seems reasonable. However, to go further and state that the costs in the general ledger should contain only the "direct" or variable costs is misleading. The "cost" of production for purposes of income determination and the "cost" of the inventory for balance sheet purposes should be based on full cost. Referring to economic analysis, the costs considered in the direct costing system are those that vary in the "short run." The term *short run* is a useful way of saying that, for the time being considered, the plant is "fixed" whereas in the "long run" all costs (variable plus fixed or "full" costs) are variable. Also, in the *long run* full costs must be covered or the firm will be out of business.

Therefore, it is important to know where the cost in each cost center is in terms of the average direct cost curve, not just to know the average direct cost. It is easy to draw a hypothetical curve on a piece of paper but difficult and expensive to obtain real data to plot. However, many factories have data for cost of varying outputs with a given fixed plant. Mr. Charles R. Fay, Comptroller of Pittsburgh Plate Glass Company, has called "direct" costing a multiple-purpose management tool and claims that, combined with a standard cost system, this procedure is far superior to conventional cost accounting procedures. His application of direct costing eliminates the necessity for volume variances, and the fixed costs are "seen in relation to sales volume . . . " and which is "proper because we must look at fixed expense as a cost of being ready to do business."[7]

Thus, it is seen that although the knowledge of "direct" costs and the nature of a direct cost curve, plotted from various outputs, is valuable for management, it does not appear to be a substitute for the accumulation of full costs for the product or cost center and for the operation as a whole. Also over an extended period of time a manufacturing firm which prices its product or products, giving recognition only to the unit variable cost of production will gradually consume its investment in long-lived assets and may cease to exist as a going concern. If this analysis were to be carried, on this point, to its logical conclusion it would be necessary to discuss in detail perfect and imperfect competition, but it suffices to say that in perfect competition the selling price is fixed by the market and the producer adjusts his output along his cost curve to maximize his profit which will be the average profit for the industry. However, if the producer has special advantages, due to some monopolistic feature or product differentiation, he will adjust along the same cost curve, but reach a higher profit figure.

Mr. Roger Wellington of Scovell, Wellington & Co., states that

> the management of a company using direct costing is furnished with periodic income and cost statements in which costs that vary with volume are distinguished from fixed costs. In making decisions on many questions faced in business operations, such information concerning marginal costs is essential.[8]

This recognition of the need of the knowledge of variable costs by management is significant, but the direct cost concept should not be confused with marginal, as there is either *total*, full *average*, or *marginal* "direct" cost. Mr. Wellington concludes his comments by stating that "management . . . should have the benefit of internal statements that analyze costs . . . between those that are variable and

[7] Fay, Charles R., "Direct Costing as a Multiple-Purpose Management Tool," *Accounting, Auditing and Taxes*, American Institute of Accountants, 1953, p. 74.

[8] Wellington, Roger, "Direct Costing and Its Implications in Financial Reporting," *Accounting, Auditing, Taxes*, American Institute of Accountants, 1953), p. 56.

those that are fixed" and that "the conventional basis, properly developed and adequately reported, seems definitely superior for general use."[9]

The "direct" costing needs the marginal concept to be complete, as the direct costs can be discussed for a given output in terms of *total* direct cost, *average* direct cost or *marginal* direct cost.

Marginal Costing

It has been shown that there is a connection between the "direct" costing system and the "marginal" costing system and the latter will now be considered in some detail. It appears that "marginal" costs are the same as "differential" costs. A reference to economic analysis is necessary at this point. In the *short run* (no change in plant or fixed assets) adjustments are made by the individual firm in the variable or "direct" costs—namely, direct labor, direct material, variable overhead and supplies. In the *long run*, adjustments are made to plant or fixed assets. In both these periods marginal analysis may be employed, as the cost of an increase in a unit of output can be considered in either case. The next step is to proceed with a theoretical analysis of these concepts and the conclusions which can be drawn from them. Many firms have data to draw the necessary curves—that is, cost data at various levels of output.

Short Run

Profit is maximized at the point where marginal cost equals marginal revenue (price) whether the firm is in a perfect or imperfect market. The marginal cost is the additional or incremental cost to produce one more unit or batch at *any* given point on the curve and refers only to the variable costs.[10]

Thus it is seen that if a curve or schedule of direct costs can be computed for production at different levels, that the *total* full, *average* and *marginal* "direct" cost can be computed from the curve. If the total at each level of production is known, even roughly, then the average and the marginal can be computed. From the marginal cost curve or schedule, the important conclusions for management can be drawn by a comparison with the demand curve. If the situation in the market is one of perfect competition (many buyers and many sellers, no one buyer or seller large enough to affect the market, and a standard product) the demand schedule is horizontal from the point of view of any one producer. In other words, he cannot set the price for his product but must adjust to the market. On the other hand, if he has control over prices in the way of monopoly of supply, price differentiation or patent control, he can maximize his gain (or minimize his loss) by setting price and output at points indicated by the equality of marginal revenue and marginal cost. This variation has been mentioned to complete the price picture but will not be expanded in this article.

Chart 1 shows hypothetical curves for total *variable*, *fixed* and "*full*" costs. "Full" costs is the sum of fixed and variable costs. Since marginal costs vary with output, the variable cost curve is *not* a straight line as the assumption of a straight line might lead to erroneous conclusions. As output increases the efficiency per unit of input of variable factors increases at first, then decreases. The increase in efficiency is shown by a decrease in the average variable cost (chart 2) up to 65 units of output; then the decrease in efficiency is shown from there on by a rising average variable cost curve. However, the average full cost declines to the point where 80 units are produced because average fixed cost is declining at a rate greater than the increase in average variable cost.

Inspection of chart 2 shows that the

[9] *Ibid.*, p. 68.

[10] Blodgett, Ralph H., *Our Expanding Economy*, an introduction to economic principles and practices, Rinehart & Co., 1955, p. 283.

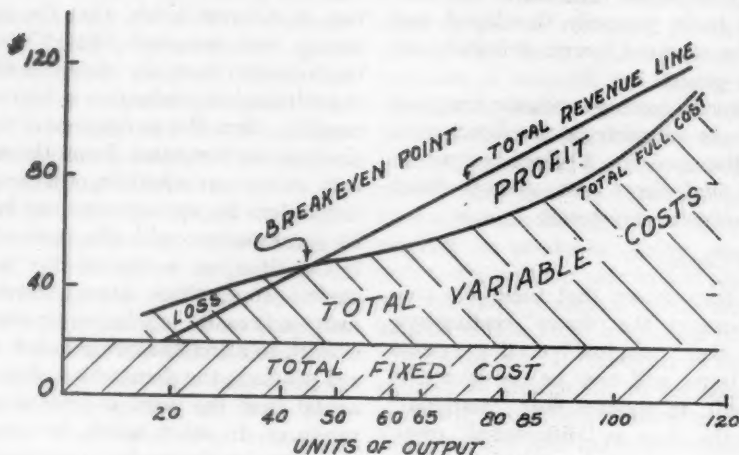

CHART 1

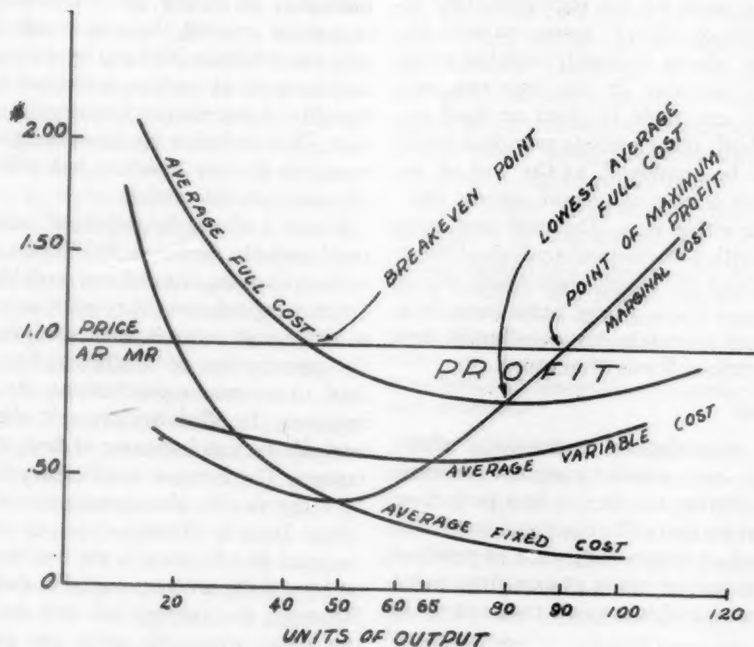

CHART 2

breakdown point (price = average full cost) is at an output of 44 units, the point of lowest average full cost at an output of 80 units, and the point of maximum profit (price = marginal cost) at an output of 90 units. On chart 1, this point of maximum profit is found where the total full cost line and the total revenue lines are farthest apart, in mathematical terms where the tangents are parallel.

Thus it is seen that marginal analysis involves, to some degree, a series of concepts developed by the economists and now used by cost accountants. While this analysis of the short run, under conditions of perfect competition, is quite theoretical, it reflects many of the concepts that have been partially discussed in the articles referred to earlier. Some of the confusion in both terms and conclusions, it appears, has come from the use of incomplete theoretical patterns. These patterns can be valuable tools for analysis when correctly used.

Long Run

In the long run, all costs are variable because in this period plant size can be adjusted upward or downward. This situation has not been explored in detail by the proponents and critics of marginal costing, but it is obvious that the total, average and marginal long-run full costs could be computed and used for management purposes. Charts showing this situation could be drawn similar to those shown for the short run.

Conclusions on Marginal Analysis

Marginal analysis, both short and long run, can contribute to management accounting and is consistent with conventional accounting techniques. The variable costs can be accumulated and analyzed for management purposes and the fixed costs can be allocated for the inventory figures shown on the financial statements.

Mr. Amerman, writing in *Accounting Research*, presents a series of mathematical equations to analyze marginal costing and uses the term "conventional absorption cost income statement." He concludes that the objections to the conventional statement may be overcome by:

(1) abandoning the present concept of profits and reporting it as the difference between income and the sum of variable cost of goods sold plus total fixed costs incurred or,

(2) retaining the present concept of profits, but reclassifying the income statement in such a way that the direct cost profit is first computed and the absorption cost increment, constituting the fixed cost component of inventory difference, thereafter added."[11]

Mr. James E. Earley, in discussing recent developments in cost accounting concludes that "cost accounting principles are fast incorporating the wisdom of the economists" and "that marginal accounting is peculiarly adapted to multidimensional enterprise, losing much of its rationale if applied to the simple firm of most conventional models."[12]

It has been shown that some concepts said to be "new" are not so new, that some terms do not mean what they appear to mean, that economics has much to contribute to cost accounting and that there is much to be gained by the cost accountant through correct analysis of his problem on a theoretical level *before* he starts to gather the data that will aid him in answering the questions of management.

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[11] Amerman, Gilbert, "Facts about Direct Costing for Profit Determination," *Accounting Research*, April, 1954, p. 161.

[12] Earley, James S., "Recent Developments in Cost Accounting and the Marginal Analysis," *The Journal of Political Economy*, June, 1955, p. 227.

THE ACCOUNTANT IN LITERATURE

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LITTLE enthusiasm has been shown, so far, in establishing the accountant as a literary figure. Dramatists, essayists and even poets have immortalized the professional executants of law, medicine, philosophy, the arts and the sciences—not to mention the often overplayed figures drawn from the Army and the Church. The reactions of these professionals to varied impulses—high and low—have been successfully depicted.

Why has the accountant been almost completely left out of the feast of literary life? Alas, is he not like all other humans possessing, one would like to think, the same sensibilities and prejudices, the same passions and *sang froid* as the others? His training is as rigorous as that of most professionals, and in the discharge of his daily duties, his services rank as high, if not higher, as that of the others. Why, then, has he not been "discovered," and found a worthy figure of greater attention by the story-teller, the poet, the dramatist or the essayist? It matters little under what auspices he could be mentioned—as a villain, as a mathematical huckster, as a demi-god of the calculus, as a man endowed with an infinite capacity for evil or as one who can do nothing but good, "doing the right thing, and contemplating the beautiful" as T. S. Eliot would put it. Why then this chasm, this dichotomy, the useful or useless lives of accountants which appear to excite no literary passions?

What is more, the accountant's work in principle, if not in detail, is so perfectly comprehensible: he commands a universally accepted and understood set of symbols, the realm of figures—indeed a plastic medium! Could it be, therefore, that his professional intercourse with figures—his particular *lingua franca*—produces a hybrid, like esperanto, which is devoid of literary fecundity? The answer must be surely no! Figures are exciting, their very economy is the transmutation of poesy rather than of prosody. Yet in the hands of its professional exponents this vitality in the world of accountancy withers and its romance stays unconsummated for the purpose of literature. The fact of the matter is that—whatever their personal disposition—in their collective expressions accountants are innocent of romance, or, at least, such is the popular appearance of their professional portrait. Yet this lack of participation in literature, or around it, must have some fairly logical reason. Are literature and accountancy incompatible? There is no valid reason why the two should be co-exclusive yet, so far, no one has practiced to combined talents of literature and accountancy in a way that other professions could be allied with literature. Gibbon, who wrote the *Decline and Fall*, was a soldier, Somerset Maugham, the author of several classics, is a doctor of medicine, scores of lawyers have written numerous good books, not to mention the merchants and craftsmen who over several centuries have written admirably about their reactions to the times in which they lived. In the end, one is inevitably led to ask the question—must one cease to be an accountant to write literature? Why was it, for instance that Richard Le Gallienne, of the *Yellow Book* fame, who wrote with such passionate understanding about the age in which he lived, of the *Romantic '90's*, should have found it necessary to leave that Liverpool firm of chartered accountants, Chalmers, Wade & Co., where he worked for seven years, to become a poet?

True he failed his examinations, and then decided to devote himself to poetry. But, at least, in the case of Le Gallienne, the accountancy profession is accorded full honors. This must be one of the rare known cases of accounting participation in literature, in launching a promising new poet on his career. It was his friends in the office of this Liverpool firm of chartered accountants who clubbed together and enabled Le Gallienne to publish, privately, his first collection of verse *My Ladies' Sonnets and other Poems.*

Yet the tools which shape the balance-sheet can be every bit as exciting and dramatic as the surgeon's scalpel or the sculptor's chisel. But romance in the literary sense, as well as in the larger, living sense, must be manifest and not esoteric. The slow shaping of a form in stone or the rapid movements of the skilled surgeon on the patient are actions in the present tense whose outcome the observer can calculate, anticipate and envisage—in other words, vicarious participation! Not so in the case of the accountant whose argosies of calculations in countless ledgers are annually consecrated in three main columns of figures, in the balance-sheet and the profit-and-loss account. It must be admitted, this sort of professional exercise is unlikely to excite anyone's propensities for passion!

Again it would be an error to presume that the accountant's work is mere routine and that its crowning results are simply adventures in black and white. Where the accountant has excited interest, even in his purely routine work, and immersed himself in adventure, is in circumstances where he employed his respectable technique to roguish ends. Here are the seeds of a good plot, the raw material for the man of letters. The little insignificant accountant in the *New Yorker* story "The Greatest Accountant in the World," relieves his employers of many thousands of dollars without a personal motive of gain, just for the love of juggling with figures: he is a man everyone would like to have met and, in these days of ready understanding of the movements of the sub-conscious, questioned about his motives. He is a mystery clad in accountants' clothes, and he uses the tools of his professional skill to bring nearer home the mystery of incalculable human destiny. Or take the accountant in Elmer Rice's play "The Adding Machine" where this dull little fellow, Mr. Zero, having been executed for killing his employer, works an adding machine in the other world, as well as in this one when he is returned to it, until he becomes the slave of this infernal calculating monster. This unusual juxtaposition of circumstances redeems the boredom of mechanical action and the accountant's punishment can be easily equated, in reverse, with that of Sysyphus. Again, in *Executive Suite*, where the almost feudal head of an organization drops dead, the accountant of the company at once assumes control of affairs and "calculates" that by so doing he can eventually succeed to the presidency. The accountant's traditional, professional characteristics are much less emphasized in this book—as well as in the play—than his human failings, attributed in this case to avariciousness and meanness. Reference to his accounting skills by his colleagues on the board are merely commonplace and occasionally suspect, comments on this character are uncompromisingly denigratory. This would appear to underline the fact that for professional competence to matter, one way or another, it must be allied with other easily recognizable human traits and qualities.

In the sporadic references to accountancy and the accountant in literature one can glean only one particular impression of the living image—unhappily not a very flattering one at that! The little men in

the clutches of the computer, the over-ambitious, scheming executive, or the men with a kink are rather pathetic; though we can perceive their actions, they are not calculated to bestow on them any sort of fulfilment in the larger purpose of life—those, which euphemistically, or otherwise, one may refer to as "daring" or "noble." Yet, the most ordinary and ephemeral can invoke sympathy and fire the imagination if their roots are in the living matrix.

Thus, literature has not ennobled the accountant so far; not, one should add, because it looks upon him as perverse, but because it considers him dull. It is this very respectability which swept the profession—individually and collectively—into that category which makes its adherents so unlikely a people for the title roles of romance. At least, such are outward appearances. They are the result not so much of design but of circumstance. A profession, which on any sort of an organized basis, is only a hundred years old—and there are others in addition to accountancy—cannot allow to show itself frivolous, only formidable. And here is the cleavage from "life" which is neither a succession of wisdoms nor a chain of follies, neither a phalanx of unpiercing respectability nor a Bohemian existence always with a "song in the heart," but a recurring combination of diverse forces and circumstances pulling all the time in unpredictable directions often towards unexpected ends.

Nothing is more calculated to explain, or even ameliorate, the laymen's conception of the accountant, or emancipate the accountant's conception of himself, than one of Graham Greene's recent short novels *Loser Takes All.* Even accountants who juggle with figures all day, and regularly take work home, could easily find the two hours required to read this book. The story is classically simple. A middle-aged accountant meets a young girl: all is arranged for quiet nuptials at an English sea-side resort when the "boss" of the company singles him out for favors which result in adventures. Fate and the boss' caprices take him and his finance to Monte Carlo where the accountant goes through a number of true-to-life motions—much at variance with the accepted pattern of experience within the orbit of most accounts. This is the crux of the book.

To earn his deserts for his adventure, the hero Mr. Bertram, the assistant accountant of a world-wide organization, first distinguishes himself by his professional expertise before the GOM—the "grand old man," the boss. As very rich people sometimes do, the GOM takes a transient liking to this not very significant creature. Summoned to the boss' office Bertram finds the source of an inaccuracy in the accounts, and by "taking in" his surroundings also notices the French impressionists' paintings on walls of the office. He discusses the paintings, as well as the beauties of French literature, Baudelaire and, oddly enough Racine, with the boss. Thus, at once, the obscure little *employee* became a *person*—if only temporarily—by sharing with the boss a human experience, the appreciation of beauty. This factor ranks higher than his professional competence, and here then is the first lesson: the accountant, whose professional competence is buttressed with well-rounded knowledge of the world scores success!

In comparing most accountants' reactions and behavior with Bertram's, all that can be hoped for is an exhortation for more experience of beauty and not necessarily more of knowledge. In the labyrinth of private and public life this homily is not likely to be superseded.

E. M. Forster immortalized the English in Italy and in India, by projecting the clash of cultures in *Where Angels Fear to Tread* and *Passage to India*, then Graham

Greene puts his fingers on the gap between a life based on professional ideals alone and a fuller life based on wider sympathies gathered in the crucible of pain and experience. Here, knowledge is no longer enough, only intelligence and wisdom will help. To solve our accountant hero's matrimonial problems, Graham Greene makes the "boss" say: "My second wife left me because she said I was too ambitious. She did not realise that it is only the dying who are free from ambition. And they probably have the ambition to live. Some men disguise their ambition that's all. There are different types of ambitions—and my wife found she preferred mine because it was limitless. They do not feel the infinite as an unworthy rival, but for a man to prefer the desk of an assistant managger, that is an insult."

The real moral, of course, lies in the method whereby Bertram re-establishes his connubial bliss. No professional primer, no accounting or economic catechism can possibly teach such unorthodoxies on approach. Bertram had to do nothing less than to purge himself "occupationally" of his former mores. Accounting measures became eradicated before the superior emotions of love. From now on, Bertram may carry on with more insight and less meticulousness in the course of his daily life. And here, is it a sign of the times one may ask, that so many accountants nowadays no longer bother to record the shillings and pence in the annual accounts of their companies? Is expedience to take the place of pompous precision?

Graham Greene's acute sense of the present has made him choose the accountant as a suitable medium for a very current social-occupational novel. In so doing he underlined the ubiquitousness of the accountancy profession as well as the lack of sophistication of most of its members. The fact seems more emphasized by making his accountant-hero, right from the beginning, appear more cultivated than his "position in life," as an assistant accountant, would normally warrant, hence, his enhanced chances for adventure and fuller living! For this truth should be engraved on the hearts of all specialists, that the world judges professional experts very differently from the way they judge themselves. Professional appreciation and recognition, although important, alone, by themselves, fall short of the ideal in gaining "status" and real acceptability among one's fellow men. And, it should be added that, to gain the hearts of others one must remain a continuous scholar in God's wider classrooms—implying that there are many things accountants should know apart from accountancy. Professional competence can, and does, provide a living, but only unrestrained emotions, uninhibited actions and experience of the world can endow life, and produce a situation which is worthy of literary treatment. The moral about accountants and life is that too many have drifted too far apart. Until that gap is narrowed, accounting endeavour will hardly merit a chronicler nor command the sympathy of the average reader who would want to know more about it.

THE FIVE-YEAR PROFESSIONAL ACCOUNTING PROGRAM*

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Anyone who proposes a course of study to implement our movement toward a professional education program must be ready for rebuttals from all angles. In spite of the fact, we can come to eventual agreement only by getting down to specifics instead of maintaining a spurious unanimity on the level of broad generalities. The program set out here is not the result of a consensus of authorities, nor is it a program slanted toward a special interest. The writer is responsible for it and proposes it to get action started.

Two premises must be understood if the proposal is to be viewed in the proper perspective. The first is the definition of the accounting profession on which it is predicated.

A profession is characterized by standards of proficiency, standards of attitude, and standards of conduct. No profession which has won its place has perpetuated segmentation of its ranks. A lawyer is a professional man—or is so considered—when he has passed the bar. He continues to be a member of the profession whether he serves as a corporation lawyer, as a teacher, holds political office, or practices in any branch of law. A doctor is a professional man when he has achieved the status, regardless of his future relationship to a business or to a patient. The designation, once earned, continues to mark him as one holding to the standards of his colleagues in the profession.

My definition of the accounting profession, then, includes the practitioner, the accountant in private employment, and the accountant who teaches, provided he has measured up to professional standards of proficiency, attitude, and conduct, and continues to do so.

The second premise has to do with professional education. In every calling that has attained the status of a profession, the organized members have recognized that achieving and holding the status of a profession requires them to take responsibility for the training and education of potential members of the profession. Inevitably, they have set up an accrediting machinery to select and subsidize those educational institutions best equipped to provide professional training by virtue of plant, staff, and programs, and to impress all educational institutions with the high standards required by the profession. From this point, evolution to a professional school is inexorable.

Both of these positions may place me in a minority. If so, it is a minority resolute in the conviction that the greatest hope for the profession of accountancy lies in this direction.

Now, let us turn to consideration of an educational program for communicating to potential accountants the body of professional knowledge and techniques and for instilling in them the attitudes and sense of values found in a professional accountant.

The *renaissance* of the decade is the reaction from overspecialization, the rediscovery that a man with an extremely narrow background of education and ex-

* This paper was presented at the first regional meeting of the Southwestern Section of the American Accounting Association, held jointly with the Southwest Social Science Association at Dallas, Texas, on April 20, 1957.

perience is at a disadvantage, in many ways, with a competitor having a broader understanding of human experience and culture. Not all of us are willing to pursue this view point to the extreme, but acceptance of its truth is widespread.

Where the breadth of education should come is a moot point. The evolution of our educational system, however, has set the model of a pyramid, with the early years devoted to the general cultural inheritance, later years to the pursuit of more specialized knowledge in limited areas, and a final topping of concentrated study in a narrow field. Professional training in accounting cannot escape the effects of this pattern.

Most of us recognize the advantages of spreading nonaccounting course-work throughout the entire education process. The student's ability to understand and to relate ideas and points of view improves with his maturity. If he takes all his arts and sciences work in the first two years, for example, both he and the fields have been discriminated against. Even though accounting courses furnish some variety in objectives, approach, methods, and relative emphasis on technique, the advanced accounting student's work in accounting will improve when he has a concurrent class in another area. Nevertheless, the five-year program will reflect the pyramid. We can do little more than move a few stones around from one level to another.

The program described below is not the ideal program, but rather a first-stage program subject to the modifications indicated by experience. It is not revolutionary, but evolutionary. Too many vested interests are affected, I think, for us to jump headlong into a radical departure from present-day curricula. We should take care not to move backward, however.

In deference to the young collegian's uncertainty about his lifework, the only decision he must make toward an accounting degree in his first year of college is to enroll in the course "Introduction to Business." I would hope that counseling would take place in this course, with descriptions of the various careers in business administration and perhaps some aptitude testing, though I am chary of the latter. With this orientation and personal counseling the freshman should be able to decide whether or not he wishes to move in the direction of a business administration degree.

	Non-business	Busi ness	Ac-counting
Freshman Year			
English, mathematics, science	18		
Economics	6		
Speech or elective	3		
Introduction to business		3	
	27	3	0

The first-year program is probably identical with the work offered in most schools or colleges of business administration now. Depending on whether economics is inside or outside, the freshman work is almost exclusively in fields outside business administration.

In the second year, the student is still not forced into an irrevocable decision on a professional accounting program. The requirement of elementary accounting is universal. You will note the recommendation of additional mathematics, although logic or even science might be acceptable substitutes. The program is still not much different from the present program.

	Non-business	Busi-ness	Ac-counting
Sophomore Year			
Literature, history, government	18		
Mathematics	6		
Accounting			6
	24	0	6
Total, two years	51	3	6

In the school not accredited to give the five-year professional program, the junior

and senior work could be intermixed to a greater extent than is shown in the illustrated plan. Requiring the student to take the first course in each business administration area during the junior year, however, has merit. Presumably, he will then have eliminated other careers in favor of accounting by the end of his junior year.

The junior-year program outlined is quite similar to that appearing in the usual college catalog, with the bulk of the work in the school of business but not in accounting. Each student would have something more than an introduction to two areas other than accounting. The six hours of accounting would probably be the first course in intermediate and elementary cost, to begin with. I believe, however, that a better course for the purpose could be organized covering the rationale of financial and cost accounting, the reasons for procedures, and the uses of accounting as a tool of analysis or of control, and the results which might be expected.

	Non-business	Business	Accounting
Junior Year			
Business administration fields (3 hours in each, 6 hours in at least two fields)		24	
Business correspondence, business law, finance, management, marketing, and statistics			
Financial accounting, cost accounting			6
	0	24	6
Total, three years	51	27	12

In the fourth year, a student will enter the professional school in most institutions. Approved schools will tend to establish two-year professional schools, though some may start out with one-year schools. As time passes, students who have decided on accounting will migrate to the accredited five-year schools at the end of their junior year. The school not approved for a five-year program will be in about the same position as it is now except that it will not attempt to expand its accounting offerings. It may continue to offer fourth-year work for the near term, but its great opportunity will be in experimenting with new approaches to accounting as a social science, as an analytical tool in finance, or as a means of managerial control, depending on the nature of its student body.

Limiting the student to 24 hours of accounting in his first four years is important if we intend to stand on the position that broad general education is desirable. The obvious means of enforcing this limitation would be for the accredited school to recognize no more than 24 hours as admission credits to the fifth year.

The fourth year is probably heavier in electives than the usual accounting program today. The accountant needs a better understanding of economics, and the course indicated would best be a course in the history of economic thought or in comparative economic systems. The statistics course would require the accounting student to take at least six hours in the use of statistical techniques; the student might take his six hours in the junior year, however, and leave room for an additional elective here.

	Non-business	Business	Accounting
Fourth Year			
Accounting: intermediate, advanced, systems and internal control, budgeting and standard costs			12
Economics	3		
Statistics		3	
Electives	6	6	
	9	9	12
Total, four years	60	36	24

The intermediate and advanced accounting courses suggested would be based on the year of accounting in the junior year, and could be more specialized than the corresponding courses now offered.

By the end of the fourth year, the student pursuing a professional accounting education will have had 60 hours of nonbusiness subjects (including economics), 36 hours in the school of business other than the 24 hours of accounting. He would be eligible for a B.B.A. in general business if he desired to get it. As an accountant, however, he would not have reached any recognized professional level.

By the beginning of the second half of the fourth year, the candidate for the fifth-year program would have taken an admission examination. This examination would be prepared by the accrediting commission of the profession and administered by the professional schools. The particular school might add a section to the uniform examination to suit its own purposes. The student passing this examination would have some professional status as being qualified for professional training. He would have no license to engage in accountancy except at the clerical level.

The fifth year course of study is open to wider differences of opinion with respect to sequence, content, and method. Some courses might be conducted on an all-day, or half-day, basis. Others might include some type of internship as a part of the course. I think the beginning will be more or less traditional, with experimentation in methods and scheduling leading to better education.

I have allowed for six hours of electives outside accounting, in one or the other, or split between, areas in the school of business or completely outside the college. The year of income tax and the year of auditing may be our present courses at first, but should be revamped as quickly as our imagination and available materials permit. A basic course in the history of accounting and the evolution of accounting theory is a must, I think, for the professional man. The case problems courses would serve to integrate theory and procedure and exercise the dicision-making muscles of the potential accountant. All kinds of possible teaching techniques and methods of conducting the courses should be investigated and experimented with. One of the accounting elective courses ought to be a course in communication and reporting unless these matters have been worked into all the fifth-year courses.

	Non-business	Business	Accounting
Fifth Year			
Electives	0-6	0-6	
Accounting: Taxes (6), auditing (6), evolution of accg. theory (3), cases in public, industrial, or governmental accounting (6)			21
Elective courses			6
	0	6	27
Total, five years	60	42	51

At the end of the fifth year of professional education, the graduate would be eligible to sit for the basic professional examination. The present examination, with changes to broaden the areas covered, would suffice. The successful candidate would receive the basic professional designation—Registered Accountant, or Accredited Accountant—and would be licensed to perform all accounting services not requiring an opinion on the fairness of presentation of statements. This designation would be the minimum requirement of teachers in accredited professional schools.

Some would grant this designation upon graduation from the professional school with no examinations beyond those given by the school. I think the examination has such acceptance in all professions as the deciding factor that we would do better to continue the practice.

Some avenue must be held open, also to the person who completes the four-year program and acquires the equivalent of the

fifth-year program by other means than attending a professional school. Perhaps some device such as advanced standing examinations could be given that individual to judge his readiness for the uniform examination.

The Accredited Accountant, or whatever his designation is, who desires to perform audits would be required to work in the employ of a CPA for whatever period the profession agrees upon. After this period, he would be eligible to sit for a brand new examination designed to measure his technical proficiency and, more important, his professional judgment on such matters as materiality, adequacy of sampling, the need for qualifications of opinion, and so on. This examination would be administered by an examining committee of practitioners and might include both written and oral parts. The written parts would be created by the Institute and graded centrally. The examining committee would judge the candidate's score on the written parts and conduct oral examinations to the extent necessary for them to determine the candidate's acceptability. Successful completion of this examination would entitle the accountant to carry the designation C.P.A., with its present meaning except that it would be elevated to a supra-professional level, something like the national boards in the medical profession.

In time, other specialties might be established at this level. For example, the Controllers Institute might grant a Certified Management Accountant designation. A tax institute might be established. There might be a place for the internal auditor or the management services specialist.

The important thing, if the profession is to rank with medicine and law, is agreement on a basic designation of a professional accountant. The CPA would be the best designation for the purpose, but it has such a great investment in it that the proposed compromise seems to be more practicable.

Until such time as the several accounting groups come together on this basic recognition and actively sponsor it, we will continue to observe the dissipation of energy in separate directions with each national organization trying to achieve professional status for its own membership—at the expense of all other accounting organizations when the chips are down. The quest for professional status is strong and persistent, it will be pursued—together, or separately. The decision calling for immediate resolution is:

Will we have a profession of public accountants, a profession of controllers, a profession of internal auditors, and so on, or will we have a profession of accountancy?

THE INTERNAL AUDITING COURSE IN THE ACCOUNTING CURRICULUM

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Professor, Louisiana State University

IN 1941, Victor Z. Brink published a book titled *Internal Auditing*. In the fall of that same year, he and several others were instrumental in bringing into existence the first chapter of The Institute of Internal Auditors. At that time, the term "internal auditor" was not generally recognized and understood.

Sixteen years later, the Institute has grown to a membership exceeding 3,400, distributed among more than fifty chapters in this country and abroad. Internal auditing in various forms and in varying degrees is consciously practiced in most of the larger firms and many of the smaller ones, in this and other countries. Even yet, however, many of our students in the colleges of commerce and a surprisingly large number of their accounting professors do not really know what internal auditing is.

In 1947, the Research Committee of The Institute of Internal Auditors published a *Statement of the Responsibilities of the Internal Auditor* which contains this frequently-quoted paragraph defining the nature of internal auditing:

> Internal auditing is the independent appraisal activity within an organization for the review of the accounting, financial, and other operations as a basis for protective and constructive service to management. It is a type of control which functions by measuring and evaluating the effectiveness of other types of control. It deals primarily with accounting and financial matters but it may also properly deal with matters of an operating nature.

In the ten years which have elapsed since this definition was formulated, the field of internal auditing has broadened. A committee is working on a revision of the original *Statement of Responsibilities*. This revision is expected to stress the constructive services to management, which have been greatly expanded in many firms in this interval.

MANY ACCOUNTING CURRICULA EMPHASIZE PUBLIC ACCOUNTING

It appears that in many colleges the accounting curriculum is heavily slanted to prepare students for public accounting careers and even more specifically, to pass the CPA examination. This point of view is strongly espoused by Jerome J. Kesselman in the *Journal of Accountancy* for April, 1957 (Vol. 103, pp. 61–65), in an article titled "Structuring the Curriculum For the CPA Examination." Professor Kesselman does just that, without even mentioning training accountants for positions in business or government. This emphasis on training for public accounting developed half a century ago and still lingers in too many schools today.

In the last forty years, cost accountants, controllers, and internal auditors have increased in stature and importance in their firms and have clamored, more or less successfully, for improved college training for students planning to enter these fields. in 1956, there were more than 50,000 CPAs in the United States, over half of whom were members of the American Institute of Accountants. Some 38,500 persons were members of the National Association of Cost Accountants at that time, while there were over 4,600 members of The Controllers Institute of America, Inc., and over 3,400 members of The Institute of Internal Auditors.

A course in basic public accounting auditing seems universally to be included

in the curriculum for an accounting major. Courses in cost accounting are generally included. Those in controllership, internal auditing, and governmental accounting have appeared more recently in the listings of many colleges.

PUBLIC ACCOUNTING AND INTERNAL AUDITING CONTRASTED

The activities of the certified public accountant, his ethical precepts, and his responsibilities are fairly generally understood. He serves his client in a number of significant ways, including systems design and installation, income tax work, management counseling, and auditing. In this latter function, he reviews the records and other evidence in order to express an opinion on the representations which the management make in their accounting statements and reports. He determines whether the client has followed generally accepted accounting principles in a consistent manner from one year to the next. The public accountant has responsibilities to outsiders who may rely upon his work, such as bankers and other credit grantors, stockholders, the government, and the general public. To serve effectively in these diverse capacities, the public accountant must have a high degree of professional competence, of personal integrity, and of independence.

On the other hand, the internal auditor is an employee of a particular firm. He is ordinarily employed to help management do a better job of managing that particular firm, and he has no responsibilities to outsiders. He usually has no direct responsibilities to the owners, the stockholders. To insure the greatest possible independence commensurate with his status as an employee, the internal auditor usually reports to some executive near the top of the hierarchy in his firm. He is generally given broad authority to investigate and to review records and operations within the firm. Nevertheless, by the nature of his position, his independence is limited.

Note that the public accountant appraises the statements prepared by management and expresses his opinion on them. Management has the primary responsibility for the accuracy of its reports. The internal auditor helps assure this accuracy. He functions as an element of management control, reviewing and appraising other management controls to make sure they are operating according to plan and in an effective manner.

Persons who are sophisticated in accounting matters realize that neither the public accountant nor the internal auditor has as his principal function the discovery of employee dishonesty in its various possible forms. Yet each, as an incident to his other work, is likely to discover any recurring dishonesty which persists over a long enough period. While both public accountant and internal auditor may originally have stressed the discovery of dishonesty, neither now does so.

The forerunners of the modern internal auditor came into being toward the end of the nineteenth century as traveling auditors. They were first employed in firms with a wide geographical separation of branch locations from the home office, such as the railroads. Before the days of bookkeeping machines, they were expected to search for fraud and to be sort of super-clerks who would discover and correct errors in the records. As machines improved clerical accuracy, this became less important. In visiting the branch locations, the traveling auditor gradually found himself interpreting home office policies and procedures to company employees there, and returning to the home office with a broad understanding of branch office problems. He began to serve as a channel of communication in both directions. To perform this work more effectively, he had to become thoroughly

familiar with company regulations and procedures and learn to explain how and why to those responsible for carrying them out.

In the course of his traveling, and as an incident to his other work, he could observe operating conditions, employee morale, customer relations, care and use of company property, and other significant aspects of the firm's operations, and report back to top management. Indeed, he could do these things better than management itself, because in spending more time in the branch locations he was able to see their operations at a more normal pace and to obtain a more accurate picture than management could do in a short (and usually pre-announced) visit.

Gradually, the internal auditor has increased his activities in appraising adherence to company policies and procedures in areas other than accounting and financial. He is continually on the lookout for waste and inefficiency in his firm in all of its operations. In many cases this constructive service to management has become much more important and more valuable than the older protective functions. This is not to imply that the internal auditor is a sort of cloak-and-dagger secret service for top management, but rather that he serves as "the eyes and ears of management" in order to help them to exercise better control than they could without him. At the same time he serves the lower levels of management, by helping them understand company policies and procedures better and in other ways helping them to do their own jobs more effectively.

CAN INTERNAL AUDITING BE COVERED ADEQUATELY IN THE BASIC AUDITING COURSE?

Many accounting teachers vaguely recognize some of these differences between internal auditing and the type of auditing practiced by the independent public accountant. However, too many feel that the subject of internal auditing can be covered in an hour or so of class time, as sort of an adjunct to the discussion of internal check and internal control, which they realize is important because it affects the scope of the public accountant's audit program.

Enough has been said here to indicate that to describe internal auditing activities in any degree of detail will probably require far more time than can usually be spared in a basic auditing course. Because of the differences in the objectives, responsibilities, point of view, and areas of operations, the job of the internal auditor is very different from that of the public accountant. The specialized material important to an understanding of internal auditing cannot be presented adequately in the usual public accounting auditing course.

THE CURRICULUM IN BUSINESS AND IN ACCOUNTING

If it is true that the subject matter of internal auditing cannot be presented adequately in a basic public accounting auditing course, what should be done? Before trying to answer that question, consider some authoritative pronouncements concerning the content of curricula in business and in accounting.

The American Association of Collegiate Schools of Business requires that at least forty per cent of the 120 semester hours or equivalent generally required for an undergraduate degree must be taken in subjects other than business and economics. At least forty per cent of the required hours must be taken in business and economics subjects, of which the major portion should be in business administration. Basic instruction must be provided (and required of each candidate for a degree) in the fields of economics, accounting,

statistics, business law, finance, marketing, and production or industrial management.

The Standards Rating Committee of the American Accounting Association in its 1953 report (published in THE ACCOUNTING REVIEW, January 1954, pp. 38–44) stated three ultimate objectives of education for professional accounting, in this order: (1) educating the citizen, (2) education in business, and (3) education in accounting. A broad general education is required for accountants, as for other college students, to develop leadership ability in community and national affairs. The accountant must have a broad knowledge of commercial and industrial affairs in order to serve these interests. He must be trained in accounting sufficiently to recognize its problems and to provide the tools with which to solve them.

For the undergraduate degree, the Committee recommended that approximately half of the four-year collegiate program be devoted to liberal, cultural, and non-business studies, approximately one-fourth to general business studies, and the remaining one-fourth to accounting studies. Required accounting courses should include accounting principles at the elementary, intermediate, and advanced levels; cost accounting and cost analysis; auditing principles and procedures; and problems of income tax accounting. Other courses recommended include budgeting procedures, governmental and institutional accounting, and accounting systems and procedures.

Recognizing (as does the American Association of Collegiate Schools of Business) that the curriculum cannot of itself do the job, the Standards Rating Committee stressed the need for a competent staff, working under conditions which will enable them to teach in an effective manner. These conditions include suitable buildings, libraries, and equipment; a reasonable teaching load both in terms of total hours and variety of courses; appropriate limitations on non-teaching college responsibilities; and a level of compensation sufficiently high to compete with that paid in public and private accounting for comparable experience, training, and responsibility.

In 1955, the American Accounting Association's Committee on Standards of Accounting Instruction completed a survey of undergraduate accounting curricula in 100 colleges and published its findings in THE ACCOUNTING REVIEW, January 1956, pp. 36–42. The results indicate a rather close adherence to the requirements of the American Association of Collegiate Schools of Business and to the suggestions of the American Accounting Association's Standards Rating Committee. The survey shows that the typical accounting major is required to take between 21 and 30 semester hours in accounting. Principles courses usually take up about half (12-18 hours) of this total, with from 3 to 6 hours each in cost accounting, auditing, and elementary income tax accounting. In most cases, whatever remained of the required hours in accounting might be completed by choosing from a number of elective accounting courses, which covered a wide range of subjects in the various schools.

In its 1956 report, *Standards of Education and Experience for Certified Public Accountants*, the Commission of like name commented upon college accounting programs (pp. 120–121) as follows:

> The Commission believes that the knowledge needed by the CPA of the principles of accounting, auditing, taxes, and other related areas of study, including a background knowledge of business administration, could be acquired effectively through the formal educational process. However, the Commission does not believe that the existing undergraduate programs in schools of business administration generally provide the depth and comprehensiveness of training for a definite professional objective which are needed by the CPAs

of today and tomorrow. . . .

The Commission believes that adequate preparation for the profession of public accountancy requires additional academic study beyond present four-year undergraduate programs. . . . The Commission envisages professional accounting programs, within the framework of collegiate schools of business administration, which will be comparable in approach and objectives to those of professional schools developed in other fields.

THE DEMAND FOR SPECIALIZED COURSES

It is natural for persons engaged in a particular activity to over-emphasize its importance. Special interest groups often put pressure on college faculties to present courses of narrow content related to their own particular fields. In many cases the faculties have succumbed to such pressures, with a resultant proliferation of courses. On the other hand, in many schools there is continual pressure on the faculty in the opposite direction from college administrators, who perceive the expense of a multiplicity of specialized courses. There is also resistance from many faculty members who prefer to stick to more basic concepts and leave the specialized areas for on-the-job training.

In the light of these comments, it might be supposed that a course in internal auditing would be too specialized to be included in the typical accounting curriculum. Let us see what is being done, and then consider what ought to be done.

In 1954, the American Accounting Association's Task Committee on Internal Auditing Education conducted a survey of internal auditing education in the United States. (Reported in THE ACCOUNTING REVIEW, January 1955, pp. 58–69.) Completed questionnaires were received from 112 different schools, of which 21 had a total of 24 courses in internal auditing. Still other schools indicated their intention to introduce such courses in the near future. The courses being offered naturally differed in detail as to their content, hours of credit, and method of presentation, but all appeared to cover the field of internal auditing reasonably thoroughly and particularly to stress the essential differences between internal auditing and public accounting auditing. For the most part, they were designed to follow a course in basic auditing. Emphasis could therefore be placed upon the special functions, responsibilities, and areas of operation of internal auditors, rather than on auditing techniques, which the student was presumed to have learned in his basis auditing course.

Textbooks, case problems, and other materials with which to teach a course in internal auditing have been prepared over the years by The Institute of Internal Auditors and its members. Current practices are reported in the Institute's quarterly journal, *The Internal Auditor*, and in the published proceedings of its annual conferences. The available material is more than adequate to provide a challenging course in internal auditing.

Earle H. Cunningham, who had been a teacher in his youth and was recently retired as General Auditor of General Motors Corporation, published an article titled "The Need for College Courses in Internal Auditing" in THE ACCOUNTING REVIEW, January 1955, pp. 51–57. He stresses the reliance which modern management must place on its system of internal control to provide reliable operating data and an assurance that its policies and procedures are being carried out. Since internal auditing is responsible for seeing that these other management controls are adequate and are operating effectively, the subject of internal auditing should be covered sufficiently in any college accounting program. It is essential, according to this author, that the student be well informed (but not necessarily highly trained) in a wide variety of business subjects, in which he has concentrated on principles, functions, and objectives. Basic auditing

can be covered in a one-semester course, the techniques peculiar to internal auditing in another. In addition to the courses recommended for the four-year college degree program, he suggests short courses for the business administration or accounting graduate who wishes later to learn specifically about internal auditing, and a series of special courses for persons already employed in internal auditing capacities, designed to help them advance in their work through obtaining a broader knowledge of its ramifications. Such courses presumably would be offered through college extension divisions or adult education classes, and need not concern us here.

WHAT MIGHT BE DONE?

Many teachers who recognize the desirability of the accounting student learning something about internal auditing are convinced that the required amount of knowledge can be presented in a lecture or two in the basic auditing course. Such coverage may possibly be sufficient to alert the prospective public accountant to the existence of the internal auditor and the necessity of reviewing his program on an audit assignment, but it is almost certain to be insufficient to present the philosophy and responsibilities of the growing field in internal auditing.

Another possibility is to include a more comprehensive treatment of internal auditing with other material in a course devoted to managerial applications of accounting, perhaps in a course in controllership, because in many firms the internal auditor reports to the controller. However, the controller has so many functions which must be covered, that the details of internal auditing may not be treated adequately in such a combination course.

Recommendation

In preference to the partial coverage which may be possible in other courses, and in spite of the difficulties which this suggestion may cause in curriculum building, it is recommended that a two- or three-semester-hour course in internal auditing and management controls be included in the accounting curriculum. This course should have as a prerequisite a basic course in auditing. It should be offered at the senior-graduate level. It should be an elective course, designed primarily for persons intending to enter private (industrial or commercial) accounting, whether or not they intend to become internal auditors. The course would also be useful to persons intending to enter public accounting.

Sound principles of internal check and the various forms of management controls should be covered thoroughly, along with the accounting aspects of the internal auditor's activities and responsibilities. The particular point of view of the internal auditor should be emphasized. His constructive services to management outside of the accounting and financial areas should be stressed. Being offered to students who (as seniors or graduates) will already have studied business organization and management as well as accounting and basic auditing, the course may well serve to integrate principles of management and principles of accounting. The course, concentrating on internal auditing in the broadest possible manner, would deal also with related phases of management organization and management controls and would consider managerial uses of accounting data in various forms. At the senior or graduate level, an opportunity is provided to consider as an integrated whole a variety of matters, some of which may already have been touched upon in other courses. Such opportunities occur all too rarely in our colleges of commerce, where the subject areas tend to be rather highly compartmentalized and students are likely to be surprised when something they have studied in one course turns out to be re-

lated to material being covered in another course in a different field.

CONCLUSION

In conclusion, it should be emphasized once again that internal auditing is a relatively new field, having grown tremendously in importance in the last fifteen to twenty years. A considerable number of people are engaged directly in internal auditing work, and a much larger number are affected who are engaged in line accounting or management work at all levels. The activities and responsibilities of the internal auditor are sufficiently specialized that they are not likely to be covered adequately in a basic auditing course or in a course dealing with the general functions of the controller.

The growing importance of the field justifies a two- or three-semester-hour elective course to be offered at the senior-graduate level. Such a course should emphasize the relationships between accounting and management theory and practice, specifically in the areas of management controls which are the particular responsibility of the internal auditor. Ample material for such a course is available in published form, largely through the efforts of members of The Institute of Internal Auditors. The successful introduction of internal auditing courses in over a score of our leading colleges suggests the desirability of considering the addition of such courses in the accounting curriculum in other schools.

REPORT OF THE ANNUAL CONVENTION

CARSON COX
Secretary-Treasurer

THE 1957 annual meeting of the American Accounting Association was held on the beautiful campus of the University of Wisconsin in Madison on August 26, 27, and 28, with the School of Commerce of the University of Wisconsin as host.

Special activities for the ladies included tours of the Cave of the Mounds, Little Norway, Oscar Mayer Packing Company and a luncheon at the Nakoma Country Club. Activities of the children consisted of a visit to Vilas Park Zoo, a fish hatchery and the Golden G. Ranch of the Bowman Dairy Company.

Major subjects covered at the sessions of the convention were:

Accounting in Industry
Accounting Theory
Training for an Accounting Career

The round table topics were as follows:

1. Techniques for Handling Increased Enrollments.
2. Relationships and Responsibilities of Teaching Staffs to Executive Department Programs and Short Courses.
3. Reconsideration of the Report of the Commission on Standards of Education and Experience.
4. What the AAA Should Do to Further the Development of Accounting Theory.
5. Problems of Students Internships in Public Accounting.
6. Concepts and Standards of Income for Taxation.
7. The Ideal Course in Elementary Cost Accounting.
8. Graduate Programs in Accounting.

At the luncheon on Tuesday, with Elmer G. Beamer, Vice President of the American Accounting Association presiding, Dean Emeritus, Fayette H. Elwell, School of Commerce, University of Wisconsin, made a welcoming address and R. Warner Ring, Vice President of the American Institute of Certified Public Accountants, spoke on the subject "Current Developments in the Public Accounting Profession." At the business meeting and the luncheon on Wednesday, with President C. A. Moyer presiding, brief reports were given by the Editor regarding THE ACCOUNTING REVIEW, by the Secretary-Treasurer regarding finances and membership statistics and by the Director of Research concerning the activities in this regard. The report on the Committee on Nominations (S. Paul Garner, Chairman, Russell H. Hassler, H. T. Scovill, Herbert F. Taggart, John Arch White) was presented by Mr. White:

President—C. R. Niswonger, Miami University of Ohio.

Vice-Presidents—James S. Lanham, University of Florida, John A. Linquist, Ernst & Ernst, Maurice Moonitz, University of California, Berkeley, James S. Schindler, Washington University.

Secretary-Treasurer—Carson Cox, Ohio State University.

Editor of THE ACCOUNTING REVIEW—Frank P. Smith, University of Michigan.

Director of Research—Ralph L. Boyd, Portland State College.

A motion was made from the floor and carried accepting the report of the Committee on Nominations and instructing the Secretary-Treasurer to cast a unanimous ballot for election of the above named persons.

President C. A. Moyer reviewed his ac-

tivities during the year, and also summarized the work of Association committees. A moment of silence was observed in memory of those members of the Association who had died since August 31, 1956.

After the banquet on Wednesday evening, President Moyer introduced the members of the Committee on Convention Arrangements, the Ladies' Program Committee, and the persons seated at the speaker's table, including President-Elect C. R. Niswonger, who made a brief acceptance speech.

Highlight of the banquet session was the presentation of Harry A. Finney of the Alpha Kappa Psi Award for outstanding service in the field of Accounting. The presentation of the award was made by Professor Wyley S. Mitchell of the University of Kansas, District Counseler of Alpha Kappa Psi.

President Moyer then asked Professor J. C. Gibson to preside during the entertainment part of the program which featured songs and dances by the Edelweiss Singers and Dancers.

The Association is greatly indebted to the Committee on Arrangements and the Ladies' Program Committee for the excellent arrangements made for us. We would like to express our sincere appreciation to all the staff members of the School of Commerce, University of Wisconsin, and especially to the Committee members listed below:

Professor & Mrs. J. Currie Gibson
Professor & Mrs. Edward J. Blakely
Professor Angeline G. Lins
Professor & Mrs. Edward S. Lynn
Professor & Mrs. Robert H. Mills
Professor & Mrs. Roy E. Tuttle

THE TEACHERS' CLINIC

A. B. CARSON

EDITOR'S NOTE: This section of THE ACCOUNTING REVIEW is devoted to matters of particular interest to accounting instructors. The contribution of articles bearing on the nature and purpose of various types of accounting education, or dealing with techniques of accounting instruction, is invited. Address all correspondence to A. B. Carson, School of Business Administration, University of California, Los Angeles 24, California.

CALCULATION vs. AN UNDERSTANDING OF NET OPERATING LOSS

JAMES H. ROSSELL
University of Pittsburgh

Taxable income is determined annually on the basis of a year's operations. With minor exceptions, there is no adjustment factor or equalization device available to the taxpayer who finds himself with taxable income in every year, though the amount of income may fluctuate widely from year to year. The years of low income will fall into a relatively low tax bracket and the years of high income may be subject to a much higher tax rate.

However, Section 172 of the Internal Revenue Code may permit the taxpayer a degree of relief when "loss years" are intermingled with "profit years," provided that any such "loss year" is due to a loss incurred in trade or business, is the result of a casualty loss, or is occasioned by a loss on the sale of real or depreciable property used in trade or business.

Such losses may be carried back to the two years preceding the loss year; then any remaining loss may be carried over to the five years following the loss year. The Code does not permit the taxpayer to choose the year to which a loss is carried. For example, a loss arising in 1956 must be carried to other years, until it is absorbed, in the following order: 1954, 1955, 1957, 1958, 1959, 1960, 1961. A net operating loss carried back to 1954 or 1955 would result in a tax refund. A net operating loss carried forward to 1957, 1958, 1959, 1960 or 1961 would reduce or eliminate taxable income in such a year.

It should be understood that the tax return loss in a given year may not coincide with the statutory net operating loss. Section 172 of the Code requires that several possible adjustments be made to the tax loss shown by the return in order to convert it into a net operating loss. It is the net operating loss, not the tax return loss, which is carried back (and then possibly forward). The required adjustments are negative in nature, for they reduce the loss shown by the tax return to arrive at a net operating loss. Thus a net operating loss is an amount smaller than the tax return loss. In fact, the required adjustments to the tax return loss could "eliminate" such a loss so that there is no net operating loss, even though the tax return loss was due, at least in part, to a loss from operation of a trade or business, from casualty, or from the sale of depreciable or real property used in business.

It is at this point that the teacher must face up to the task of explaining how a tax return loss is converted into a net operating loss. While it is relatively easy to explain to a student the various technical steps involved in calculating a net operating loss under the Code, it is rather difficult to convince him of the logic involved. Though the instructor may emphasize initially that the purpose of the various adjustments required to convert an income tax loss into a net operating loss is to arrive at an "economic" or "out-of-pocket" loss, the student can quickly lose sight of the ultimate objective if he mechanically applies the

provisions of the Code to a given set of facts.

Two sets of facts will be utilized to illustrate the point in question. Each will be solved in the orthodox technical manner. Then an alternative method will be employed to arrive at the same answer through logical analysis. The two examples will deal only with an individual taxpayer so that business and non-business facts may be contrasted. While sufficient Section 172(d) adjustments will be involved to make the cases comprehensive, no attempt will be made to employ all possible adjustments and combinations of facts. Similarly, occasional references will be made to specific sections or line numbers on the 1956 tax return (Form 1040) for the sake of clarity and brevity of explanation.

EXAMPLE ONE

Facts:

Taxpayer's return (Form 1040) contained the following for 1956:		
Salary		0
Ordinary non-business gross income, such as dividends and interest which would appear in Schedules A and B of Form 1040		0
Schedule C (Profit (or Loss from Business or Profession:		
Business income	$50,000	
Business deductions	89,000	
Loss		$(39,000)
Schedule D—Part I—Capital Gains and Losses:		
All transactions for the year were non-business.		
Net long-term capital gain	$ 5,000	
Long-term capital gain deduction	2,500	2,500
Schedule D—Part (II)—Gains and Losses from Property Other Than capital Assets		0
Net Income from Rents (Schedule G)		0
Adjusted Gross Income		$(36,500)
Other Itemized Deductions:		
Ordinary non-business deductions, such as taxes and interest paid, medical expenses, miscellaneous, etc.	$11,000	
Non-business casualty and theft losses	0	11,000
		$(47,500)
Deductions for personal exemptions.		1,800
Income tax net loss (page 2, line 5).		$(49,300)

Orthodox Technical Solution:[1]

Loss shown by tax return		$49,300
Less: Statutory adjustments:		
(a) No net operating loss deduction is allowable	0	
(b) No long-term capital gain deduction is allowable	$2,500	
(c) No deduction for personal exemptions is allowable	1,800	
(d) Non-business capital losses may not exceed non-business capital gains	0	
(e) Ordinary non-business deductions[2,4] may not exceed the sum of ordinary non-business income[3,4] *and* the excess of of non-business capital gains over losses	6,000	
(f) Business capital losses may not exceed the sum of business capital gains *and* any excess of non-business capital gains over losses remaining from point (e) immediately above	0	10,300
Net Operating Loss		$39,000

It is at this point that many an above-average student, having worked out the orthodox technical solution line by line, loses sight of the logic involved. Moreover, such a student may decide that the topic is highly complicated and that the easiest

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[1] Prentice-Hall, "Federal Tax Course—1958" (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1957), pp. 2227–2228.

[2] Does not include deduction for exemptions or long-term capital gain deduction. Furthermore, non-business deductions do not include non-business casualty or theft losses inasmuch as such casualty or theft losses are considered *as* one of the types of losses giving rise to a possible net operating loss.

[3] Does not include salaries or rental income. Both such items are classified as "business" income.

[4] Losses and gains from the disposition of real and depreciable property used in trade or business are not included in non-business deductions and non-business income, but are treated as business deductions or income. Such losses are a cause of a possible net operating loss.

way out is to memorize the list of necessary adjustments.

Alternative Solution:

The instructor should now have the student review the causes of a net operating loss:

A loss from the operation of a trade, business, or profession.

A casualty or theft loss.

A loss from the sale of depreciable property or real property used in business.

With the causes firmly in mind, review the facts given in example one. What is the only "loss' shown by the tax return? Is it not the loss shown by Schedule C? And is this not the first of the above-listed three causes of a net operating loss?

As is often the case, the net operating loss ($39,000 in the orthodox technical solution) is equal to the "red ink" (loss) established on Schedule C of the taxpayer's return. Is it not logical that the two amounts should agree? When the student recognizes the basic philosophy of Section 172, he should be able to arrive at the correct net operating loss for an uncomplicated situation without going through the involved procedures of the Code. However, a word of caution is necessary here. While this alternative solution is elementary in demonstrating the logical conclusion that net operating loss *is* the amount of the business loss as shown on Schedule C, this must not always be assumed to be the case. For example, this may not be so when (1) non-business income exceeds non-business deductions, (2) non-business casualty or theft losses are present, (3) losses or gains arise from disposition of real or depreciable property used in trade or business, and (4) "business" transactions (such as salary or rental income) other than those shown in Schedule C exist. These exceptions should not be used to invalidate the original point. An understanding of the intricacies of net operating loss can be more readily developed by a student if the first example is not too involved.

EXAMPLE TWO

Facts:

Taxpayer's return (Form 1040) contained the following for 1956:		
Salary		$ 8,600
Schedule C—Net loss from business		(19,000)
Schedule D I—*NLTCG 800—LTCG Ded. 400		400
Schedule D II—Loss on sale of machinery used in business		(3,000)
Schedule G—Rental Income		1,000
Adjusted Gross Income		$(12,000)
Other Itemized Deductions:		
Taxes	$ 700	
Interest	300	
Casualty loss on residence (due to flood)	2,500	3,500
		$(15,500)
Deduction for personal exemptions		1,800
Income tax net loss (page 2, line 5)		$(17,300)

* All capital asset transactions were "non-business" in nature.

Orthodox Technical Solution:

Loss shown by tax return		$17,300
Less: Statutory adjustments:		
(a) No net operating loss deduction is allowable	0	
(b) No long-term capital gain deduction is allowable	$ 400	
(c) No deduction for personal exemptions is allowable	1,800	
(d) Non-business capital losses may not exceed non-business capital gains	0	
(e) Ordinary non-business deductions may not exceed the sum of ordinary non-business income *and* the excess of non-business capital gains over losses	200	
(f) Business capital losses may not exceed the sum of business capital gains *and* any excess of non-business capital gains over losses remaining from point (e) immediately above	0	$ 2,400
Net Operating Loss		$14,900

Alternative Solution:

The alternative solution, or proof of the

technical solution, emphasizes the theory involved in the calculation of net operating loss, i.e., that the loss to be carried back or over to another year must arise from the operation of a business or profession, from casualty or theft, or from the sale of depreciable property or real property used in business. From the facts on the tax return in example two, list the amounts of the three causes of net operating loss. Then reduce the sum of these losses by any business income. This will give the same amount for net operating loss as found by the orthodox technical solution.

If non-business income (such as dividends or interest received) had exceeded non-business deductions, this excess would have reduced the amount of the net operating loss. Additional factors might occur which would require adaptations of the method employed in the alternative solution. The unusual and the exception are always present in tax. This should not be

"Eligible" losses from business or casualty:		
Loss from business or profession		$19,000
Loss on sale of machinery used in business		3,000
Casualty loss on residence		2,500
Total business and casualty losses		$24,500
Reduced by "business" income:		
Salary	$8,600	
Rental Income	1,000	
Total "business" income		9,600
Net Operating Loss		$14,900

permitted, however, to prohibit the use of a logical method whereby a new topic may be introduced to a student.

The alternative solution presented above should give a student an understanding of the logic involved in the determination of net operating loss. With such an understanding, a student can readily appreciate additional adjustments of a more complex nature. Thus he is better prepared to consider the remaining technical facets of the topic.

THE FACULTY FELLOWSHIP AND ACCOUNTING EDUCATION

Kenneth W. Perry
University of Illinois

In this day and age, when change is the normal condition under which the accountant lives and works, we as accounting teachers are constantly faced with the almost insurmountable task of keeping up with current developments; and, of course, if we are to make our greatest contribution, we must keep up. Although one might read extensively and perhaps in some instances participate in some part-time work with an accounting organization, still there is a great deal of "digging" to be done in order to keep abreast. Normally, if we need and want help in a particular area it is up to us, as individual teachers, to do something about it. Recognizing this need, and realizing and accepting their responsibility in the area of accounting education, at least one public accounting firm has taken steps to assist the individual faculty member in his efforts along this line. This is currently being accomplished by means of faculty fellowships.

Although many organizations are contributing to the educational process by providing internships, scholarships, fellowships, etc., for the individual student, this particular firm thought that perhaps they could also make a contribution by establishing faculty fellowships, whereby they would make their resources, both material and mental, available to the accounting teacher. Although their contribution is not directed at any particular student, it is

hoped that many will benefit indirectly if the firm can aid the individual instructor to increase his understanding of his particular problem.

The writer has been fortunate enough to be the recipient of one of these fellowships, and although it was for only two weeks duration it is his belief that his knowledge and understanding of certain areas (areas in which he is currently teaching) were greatly increased, and as a result he is confident that his teaching in the respective areas is bound to improve. Although each teacher would probably have a somewhat different problem or problems, and as a result each program would be somewhat different—especially since the programs are tailored to fit the needs—perhaps nevertheless, an explanation of how one of these programs works would be of interest.

How the Program Works

As soon as a recipient has been selected for the fellowship and his specific needs determined, the firm selects a "sponsor" for him. The sponsor—who is more or less responsible for the faculty member while he is with the firm—in conjunction with the instructor determines the best method of accomplishing the mission. He makes the necessary material available, he determines what staff members can best help the instructor and sees that they are available, and last but not least he makes himself available to answer any question or questions the instructor might raise and to discuss any particular point or points on which he might wish further elaboration. In the writer's particular case the sponsor was a partner. It may be added here that some of the most interesting as well as informative periods of the fellowship were spent in discussing various problems with the sponsor.

Among other subjects the writer is currently teaching "consolidations" and "current topics." The latter subject, of course, requires constant research. In addition, however, the recent survey entitled *Survey of Consolidated Financial Statement Practices* conducted by the Research Department of the American Institute of Certified Public Accountants seems to indicate that perhaps research from the standpoint of the teacher is also in order in the consolidated area in general and especially in such areas as intercompany profits in inventories, intercompany bonds, and foreign subsidiaries. The survey seems to indicate in many ways, at least in this writer's opinion, that the textbook approach is frequently too far removed from the practical approach to the solution of these and similar problems. Granted that the two approaches need not necessarily be the same, they nevertheless should not be so far apart as to be irreconcilable. Consequently, the writer desired to do some research not only on current topics, such as mergers and acquisitions, but he also wanted to check up on what was actually being done in practice regarding the aforementioned consolidation problems. Since his needs were somewhat technical in nature, a technical partner of the firm was assigned as his sponsor.

As indicated earlier, the firm made available not only their material but also their mental resources. Consequently, when a particular problem was being studied, they made available not only their material resources such as audit reports and correspondence files, but they also made available their mental resources such as managers and partners. In any given situation the material resources would be studied first in order to read into and establish one's position in the problem. After seeing what was being done or had been done, the underlying reason(s) would then be obtained from the appropriate staff member. For example, when working on consolidated statements, materials covering a

particular problem, for instance, the consolidation of foreign subsidiaries, would be made available; and after determining by detailed study what was actually being done, the underlying reasoning would be discussed with the manager and/or partner in charge of the job. It should be pointed out that at no time during the fellowship period was a question evaded in any way. A forthright and soundly-based answer was always given.

Normally whenever a teacher wants to do research in an area such as consolidations, he is limited to the resources at his immediate disposal such as reference books, periodicals, and annual reports. Although we as teachers can obtain annual reports and can read extensively in the area, we must remember that in the case of the annual report we are looking at the finished product, and when reading reference books, periodicals, etc., we seldom get to the facts underlying any given situation—especially all of the facts. However, when one can study actual situations with all the relevant facts, he can get a much better perspective of the problems involved. For example, when studying some of the problems involved in consolidating foreign subsidiaries, one can read about "free rates," "official rates," "prevailing rates," "dual rates," etc., without getting the full significance of the differences. However, when one can study in detail, with the assistance of an expert when needed, a problem of consolidating "subs" in 30 or 40 foreign countries with 20 or 30 different types of money, different restrictions on imports and exports, etc., he can get a much better appreciation of the problems involved. The fellowship gave this writer the opportunity to study several consolidation problems and also gave him the opportunity to discuss their solutions with the people who have the primary responsibility for solving them.

In addition to problems of consolidation some of the fellowship, as indicated earlier, was devoted to research in some of the areas covered in a current topics course. Of special interest here was the role and function—accounting-wise primarily—of the Securities and Exchange Commission as related to (1) reporting, and (2) business combinations.

Again, as in the case of consolidations, the material most readily available to the teacher interested in the S.E.C. is composed primarily of references, such as the Securities Acts, Regulation S-X, and Accounting Series Releases, and the finished product such as registration statements, listing applications, and published annual reports. Granted that when one who is familiar with the rules and regulations of the S.E.C. examines the finished product, he is able to deduce a certain amount and arrive at some worthwhile conclusions. However, when one can examine, with the assistance of an expert who is familiar with the overall situation, the audit report and the correspondence that took place among the underwriters, the lawyers and accountants involved, and the S.E.C. he can get a much better picture of what actually took place and as a result a much better understanding of the role and function of the S.E.C. in the particular area.

In addition, a study of this type gives the participant the opportunity to observe at close range the teamwork that must exist between the lawyers and accountants involved and between them and the S.E.C.'s staff. For example, both the lawyer and the accountant are vitally concerned with the deficiency statement, and a study of this nature gives the teacher an insight not only as to how these two go about correcting their respective deficiencies but also an insight as to how they operate when working out unusual or complicated deficiencies with the S.E.C. One can read about the teamwork and techniques involved among these groups, but

to actually observe them at work in a given situation once is, in this writer's opinion, more valuable than reading about it a dozen times.

During the fellowship an opportunity was given to study in detail and to observe at close range S.E.C. related problems running all the way from simple registrations of new issues to registrations dealing with mergers and/or acquisitions. In this era of business combinations we as teachers must not only be familiar with the recommended treatment of the problems involved, but in order to do the best job we must also be familiar with the procedures and techniques involved in the practical application of the recommended treatment applicable under the circumstances. A faculty fellowship can provide much assistance in this and similar areas.

Conclusions

In conclusion it should be reiterated that we as accounting teachers have a definite responsibility, not only to our students but also to the accounting profession, to keep abreast in this ever-changing accounting world. Although we have certain resources available, at times they may be inadequate and as a consequence we may have to look elsewhere for assistance. When looking elsewhere perhaps the faculty fellowship, if available, will fulfill this need. It is, in this writer's opinion, a definite step in the right direction, and it is his hope that other firms will initiate similar programs.

In addition to acquiring new, or as the case may be, broadening old technical knowledge the fellowship is also an excellent morale builder or "interest stimulator." After teaching for several years and then being exposed to the interest and enthusiasm of the various staff members, it challenges one to want to get back in the classroom and turn out the best product he can possibly produce.

Teaching from the textbook from day to day may not be as stimulating as it should be, so perhaps we as teachers need to be reminded occasionally that we are members of a vital and dynamic profession. Although this writer is sure that he benefited, and in turn his students will benefit, tremendously from the experience, it is his belief that even if he had not gained educationally his time would have been well spent, if for no reason other than the fact that his responsbilities to the profession he has chosen and to the society in which he lives have been re-emphasized and his desire to do his best for both restimulated.

A NON-THESIS PROGRAM FOR MASTERS' CANDIDATES

Arthur N. Lorig
University of Washington

Experience at the University of Washington, and probably at most institutions of higher learning, is that many masters' theses are never completed. Often, the fault is not in lack of student's ability but rather in new demands on his time and a lessening of interest that come with the acceptance of employment before the thesis is finished. The mortality of masters' candidates can be surprisingly high for this reason.

Some college faculty members and administrators argue that the responsibility for not completing a thesis is entirely the individual student's—that without the continuing desire and persistence necessary to complete the writing, the degree is not deserved. Nevertheless, there is something tragic in a condition which causes a college to lose, as possible advanced degree holders, able students who have already devoted so much time to advanced study

and proven their worth. If the situation could be improved without sacrificing standards in any way, then measures should be taken to bring about the improvement.

The College of Business Administration at the University of Washington sought for a possible change in its degree requirements which would correct the difficulty being experienced. A proposal to permit substituting some other work for the thesis (following the example of many other colleges) was considered. The feeling prevailed that instruction or guided practice in research and writing must be retained as a necessary part of the graduate training, but a conviction reached was that the research and writing guidance should be given at the same time as study courses were being taken. In that way, the writing would normally be completed by the time the course work was finished, before the student stepped forth into a business or teaching position.

After some experimentation and change, the plan adopted included the following features:

1. The Master of Business Administration degree aspirant is given a choice of a thesis or non-thesis program. The Master of Arts student, who is more likely to aim toward teaching and hence toward the doctorate, is still required to write a thesis.
2. The non-thesis program requires the student to take three special research courses of three quarter-credits each. This total of nine credits corresponds to the nine allowed for an accepted thesis under the thesis program. The classes customarily meet one day a week for two or more hours.
3. The first course (General Business 570, Seminar in Business Research) is taken in the first or second quarter of enrollment as an MBA student. In it the student is taught research methodology, including statistical, survey, analytical, market research, and operations research methods. During this quarter the student in the non-thesis program selects a topic on which he will write a major paper during the next two quarters. He begins his research at this time. A student under the thesis program also may enroll in and receive credit for this course, but not the other two courses in the series.
4. General Business 571, Business Studies, is the second course. During the first two weeks of the quarter, the student must submit an outline of his proposed work bearing the approval of the chairman of his personal committee. The members of the class and the instructor examine and constructively criticize the outline, and revisions are made and writing started during this quarter. A requirement is that the outline and writing be intelligible to graduate students, even in other fields.

   Part of the course work includes an evaluation of theses and reports written in the past. But as the writing progresses during the quarter, the student submits chapters of his own work for class criticism of format, writing techniques, etc.

   No separate grade need be given for this course, it is hyphenated with the next course, General Business 572. The one instructor carries the same group of students through both quarters of work and can assign a single grade for the student's work for the whole period. However, if a student is doing unsatisfactory work in the first of these two quarters, a grade (deservedly low) is sometimes given to warn him or, in effect, to terminate his work.
5. General Business 572, Business

Studies, is the final course in the series. The class meets less often but the student has more personal interviews with the instructor. About the middle of the quarter a draft of the report is expected to be completed, after which it undergoes the customary revision and polishing. Both the chairman of the student's committee and the instructor in the course are to be satisfied with the paper before it is finally approved and a passing grade given.

The experience with this non-thesis program has been quite satisfactory. Proportionately more of the graduate students are completing the work and obtaining degrees. Furthermore, it is found that the papers written compare very favorably with master's theses both in length and quality. The fact that the students' work is subjected to criticism by so may others actually has resulted in a higher minimum standard of quality than seems to exist for thesis writing. A definite feeling among the faculty members is that the program is successful and should be continued.

COMPARISON OF RESULTS OF AIA ACHIEVEMENT TEST AND ACE PSYCHOLOGICAL EXAMINATION

Robert C. Riley
Lebanon Valley College

The present study was undertaken to determine the correlation or covariation of students' percentile scores on the American Institute of Accountants Achievement Test, Level I (AIA-I) with the percentile scores (*total*, *quantitative*, and *linguistic*) of the same students on the American Council on Education Psychological Examination (ACE) in order to ascertain the predictive value of the latter in forecasting probable achievement on the former.

The AIA-I is designed to measure achievement of individual students in a given college and to provide a comparison with the achievement of students in other colleges. It is administered at this institution on a required basis at the end of the sophomore year to all students enrolled in the first year of accounting instruction. The ACE is designed for the appraisal of scholastic aptitude, or general intelligence, with reference to the requirements of most college curricula. In addition to the *total* score on this examination, there are available part scores—*quantitative* and *linguistic*. The Q-score purports to reflect ability to deal with the type of material covered in technical curricula whereas the L-score is supposed to indicate ability to succeed in those fields which require proficiency with language and facility of expression.

The data for this study were comprised of the percentile scores of ninety-five students on the ACE (1948 edition) and the AIA-I (Forms A and B), the latter having been administered in the years 1953–1957 inclusive.

The Spearman coefficient of rank correlation of AIA-I with ACE total and part scores was computed for each of the five years with the results tabulated at the top of the next page.

It is to be noted that the ACE *total* score shows a significant rank order correlation at or below .01 level of confidence for two years and at or below .05 level of confidence for the other three years. The .01 level of confidence was attained in two years for *quantitative* scores and only in one year for *linguistic* scores. The .05 level of

Spearman Coefficient of Rank Correlation AIA-I Percentile Scores and the ACE Percentile Scores and Levels of Confidence for Ninety-Five Students, 1953–1957*

Year	*N*	*Total*	*Level of Confidence*	*Quantitative*	*Level of Confidence*	*Linguistic*	*Level of Confidence*
1957	24	.42	<.05	.30	>.05	.48	<.01
1956	22	.64	<.01	.43	<.05	.47	<.05
1955	18	.42	<.05	.21	>.05	.53	<.05
1954	12	.66	<.05	.71	<.01	.37	>.05
1953	19	.49	<.01	.62	<.01	.53	<.05

* Guilford, J. P., *Fundamental Statistics in Psychology and Education*, New York: McGraw-Hill, 1956, p. 554.

confidence was achieved in three years for *linguistic* scores and in one year for *quantitative* scores, so that failure to attain .05 level of confidence was experienced in two years for *quantitative* scores and in one year for *linguistic* scores.

The product moment coefficient of correlation for ACE part and total scores and the AIA-I scores for the five years combined are as follows:

Years	*N*	*AIA-I & ACE-T*	*AIA-I & ACE-Q*	*AIA-I & ACE-L*
1953–57	95	.49±.078	.40±.087	.43±.084

Each coefficient is significant at the .01 level of confidence, indicating that AIA-I scores do tend to co-vary with the ACE total and part scores.

When ACE *total*, *quantitative*, and *linguistic* scores were grouped in the following manner, the AIA median for each range was found to be as follows:

ACE Percentile Range	*AIA MEDIAN FOR*					
	ACE-T	*N*	*ACE-Q*	*N*	*ACE-L*	*N*
1– 20	36	9	62	7	51	16
21– 40	62	17	61	18	64	18
41– 60	69	23	61	17	76	20
61– 80	74	27	77	15	71	27
81–100	91	19	83	38	88	14

Nine of the ninety-five students had ACE-T percentiles falling within the range 1 through 20. The median percentile score of the AIA-I of this group of nine students was 36. Nineteen of the ninety-five students had ACE-T percentiles falling within the range 81 through 100. The median percentile score on the AIA-I of this group of nineteen students was 91. This form of presentation reveals the closer variation of AIA-I scores with ACE-T scores as compared with the ACE-Q and ACE-L scores.

(Tabulation is given at the top of the next page)

Thirty-nine of the students with ACE-T percentile scores below the median (average 30.0) averaged 57.3 percentile on the AIA-I. The fifty-six students with ACE-T percentiles at or above the median (average 73.7) averaged 72.5 percentile on the AIA-I. In two of the five years, students with ACE-T percentile scores at or above the median scored above their ACE average on the AIA-I whereas students with ACE-T percentile scores below the median scored above their ACE average in each of the five years.

Summary

1. There is significant correlation between the ACE *total*, *quantitative*, and *linguistic* scores and the AIA-I scores. The most consistent covariation obtained in the case of the *total* score rather than the *quantitative* or *linguistic* scores.

2. Students who scored below the median on the ACE total test averaged a higher percentile rank on the AIA-I test than would have been predicted from the ACE score, indicating possible overachievement.

3. Students scoring above the median on the ACE total test averaged on the AIA-I percentile ranking approximately on

Comparison of Achievement by Students as Indicated by AIA-I Percentile Scores for Those with ACE-T Percentile Scores At or Above the Median with Those Below the Median, 1953–57

Year	Below the Median			At or Above the Median		
	N	ACE Average	AIA-I Average	N	ACE Average	AIA-I Average
1957	10	32.9	63.5	14	73.1	67.3
1956	8	31.5	44.5	14	71.0	77.4
1955	10	30.0	65.8	8	77.8	72.6
1954	3	22.0	46.7	9	68.8	64.3
1953	8	27.8	55.6	11	79.2	79.5
5-yr Average	39	30.0	57.3	56	73.7	72.5

par with their average ACE percentile ranking, indicating that achievement was on the level predicted by the ACE test.

In conclusion, the ACE is a relatively accurate predictor of achievement in accounting as measured by the AIA-I. However, the ACE, as a predictive instrument, is less accurate in the case of students with low scholastic aptitude than with high, indicating possible overachievement on the part of the less well-qualified students.

PROFESSIONAL EXAMINATIONS

ACCOUNTING PRACTICE

HENRY T. CHAMBERLAIN

THE following problems were prepared by the Board of Examiners of the American Institute of Certified Public Accountants and were presented as the first half of the examination in accounting practice on November 6, 1957.

The candidates were required to solve all problems in four and a half hours. The total weight assigned to this section of the examination was 50 points and the examiners point out that the suggested time allowances are approximately proportional to the point value of the various problems.

The suggested time allowances are as follows:

Problem 1	30 to 40 minutes
Problem 2	30 to 40 minutes
Problem 3	22 to 35 minutes
Problem 4	28 to 40 minutes
Problem 5	35 to 55 minutes
Problem 6	40 to 60 minutes

Number 1

A, B and C became partners on January 1, 1947. There was no provision in their original agreement as to sharing profits, but the agreement did provide that each partner would be entitled to $5,000 salary as a distribution of profits. The capital contributions were: A—$20,000, B—$30,000, and C—$50,000.

As of January 1, 1952 the partnership agreement was amended to provide thereafter for distribution of profits after salaries in the original capital ratios. This agreement is still in effect.

You have been called in as of December 31, 1956 to review their books and records and to advise them of their proper capital balances.

An examination of their records disclosed the following:

1. **Assets per books 12/31/56—$270,000. Liabilities—$95,000.**
2. **Total withdrawals made and charged against capital:**
   A and B—each $3,000 per year for the ten years.
   C—$3,000 per year for the first five years and
   $4,000 per year since.
3. **Profit per books:**

1947	$15,000	1952	$14,000
1948	17,000	1953	16,000
1949	18,000	1954	20,000
1950	14,000	1955	18,000
1951	16,000	1956	22,000

4. **The review of the principal records revealed that some material errors had been made at various times. These errors were as follows:**
   (a) **December 31, 1949 inventory was overstated by $15,000**
   (b) **December 31, 1949 depreciation was overstated by $3,000**

(c) December 31, 1951 inventory was overstated by $8,000
(d) December 31, 1954 depreciation was understated by $3,000
(e) December 31, 1956 inventory was understated by $20,000

Prepare any adjusting entries needed at December 31, 1956 to properly reflect the capital accounts of the partners. Support your entries with schedules in good form.

Number 2

You have been assigned to verify the provision for Federal income taxes for the calendar year 1956 for X Company. The Company has provided $514,500 which is based on the net income before Federal income taxes per books of $1,000,000.

During the year the Company purchased new machinery and equipment for $500,000. These assets have an estimated life of 10 years, and depreciation of $250,000 computed on the straight-line basis has been recorded on the books. Because the Company's working capital is low, it has been decided that the declining balance method of depreciation will be used so that the current year's tax liability will be kept at a minimum. The Company's books are to be adjusted accordingly.

In order to raise funds to purchase the machinery and equipment, the Company had its wholly-owned subsidiary, X Corporation, pay a dividend of $200,000. An additional $200,000 was borrowed from a bank. Part of the proceeds from an anticipated refund of Federal income taxes for the calendar years 1953 and 1954 will be used to pay the bank loan. The refund arises from the carry-back of $1,750,000 of the $2,185,000 loss from operations sustained in 1955. The balance of the cost of the machinery and equipment was provided from the net proceeds from the sale of stock in an unrelated company for $75,000 which cost $125,000 in 1950, and of land for $35,000 which cost $43,000 when it was acquired in 1942 to store scrap and raw materials applicable to U. S. Government contracts.

The provision for bad debts of $50,000 is ½ of 1% of gross sales. The provisions for prior years computed on the same basis have been allowed through the year 1953, which was the last year examined by the Internal Revenue Service. In addition, account balances totaling $7,200 were charged to miscellaneous expense and recoveries of accounts previously written off totaling $2,100 were credited to other income.

The Company maintains a reserve for returns and allowances which has been charged with $32,400 allowed to customers during the year. The provision for the current year, $35,000, appears to be reasonable based on past experience and the volume of sales.

Charitable contributions to educational institutions, which amounted to $12,825 last year were reduced to $5,200 in the current year due to the low working capital.

The audit has been completed except for verification of the provision for Federal income taxes. Other adjustments to be made will be for an overstatement of the ending inventory, $65,000, and the accrual for year-end bonuses, $25,500, which as in prior years has been computed by your firm after the necessary figures were obtained.

Prepare a schedule in good form showing the adjustments necessary and the computation of X Company's Federal income tax liability for the calendar year 1956 *and* the *amount* of the adjustment to be made. (*The tax rates amount to 30% on the first $25,000 of income and 52% on the excess.*)

Number 3

The president of the Farmbrook Manufacturing Company is concerned because his

gross profit has decreased from $130,000 in 1955 to $87,960 in 1956. He asks you to prepared an analysis of the causes of change.

You find that the company operates two plants, each as a separate unit. Investigation reveals the following information:

Plant No. 1 (Makes a variety of products)

	1956	*1955*
Sales	$200,000	$300,000
Cost of sales	160,000	210,000
Gross profit	$ 40,000	$ 90,000

Plant No. 2 (Makes only one product)

	1956		*1955*	
	Amount	*Per unit*	*Amount*	*Per unit*
Sales	$112,200	$10.20	$100,000	$10.00
Cost of sales	64,240	5.84	60,000	6.00
Gross profit	$ 47,960	$ 4.36	$ 40,000	$ 4.00

Prepare a detailed analysis of the causes for the change in gross profit for each of the plants to the extent that the above data permit such an analysis. Critical comment on the analysis is *not* required.

Number 4

The Valley Manufacturing Company was incorporated on January 2, 1956, but was unable to begin manufacturing activities until July 1, 1956 because new factory facilities were not completed until that date.

The Land and building account at December 31, 1956 was as follows:

Date	*Item*	*Amount*
January 31, 1956	Land and building	$ 98,000
February 28, 1956	Cost of removal of building	1,500
May 1, 1956	Partial payment of new construction	35,000
May 1, 1956	Legal fees paid	2,000
June 1, 1956	Second payment on new construction	30,000
June 1, 1956	Insurance premium	1,800
June 1, 1956	Special tax assessment	2,500
June 30, 1956	General expenses	12,000
July 1, 1956	Final payment on new construction	35,000
December 31, 1956	Asset write-up	12,500
		$230,300
December 31, 1956	Depreciation—1956 at one per cent	2,300
	Account balance	$228,000

The following additional information is to be considered:

(1) To acquire land and building the company paid $48,000 cash and 500 shares of its five per cent cumulative preferred stock, par value $100 per share.

(2) Cost of removal of old buildings amounted to $1,500 with the demolition company retaining all materials of the building.

(3) Legal fees covered the following:

Cost of organization	$ 500
Examination of title covering purchase of land	1,000
Legal work in connection with construction contract	500
	$ 2,000

(4) Insurance premium covered premiums for three-year term beginning May 1, 1956.
(5) General expenses covered the following for the period from January 2, 1956 to June 30, 1956:

President's salary	$ 6,000
Plant superintendent covering supervision on new building	5,000
Office salaries	1,000
	$12,000

(6) The special tax assessment covered street improvements.
(7) Because of a general increase in construction costs after entering into the building contract, the Board of Directors increased the value of the building $12,500, believing such increase justified to reflect current market at the time building completed. Earned surplus was credited for this amount.
(8) Estimated life of building—50 years.
Writeoff for 1956—one per cent of asset value (1% of $230,000, $2,300).

a. Prepare entries to reflect correct land, building and depreciation allowance accounts at December 31, 1956. *Post* the entries for land and building to skeleton "T" ledger accounts or *list* them in a schedule.
b. Show the proper presentation of land, building and depreciation allowance on the balance sheet at December 31, 1956.

Number 5

You are a senior accountant responsible for the annual audit of Black, Inc., for the year ended 12/31/56. The information available to you is presented below. You may assume that any pertinent information not presented below has already been checked and found satisfactory.

(1) *Excerpts from Trial Balance 12/31/56*

	Debit	*Credit*
Surplus	$	$40,000
Inventory reserve		7,500
Capital stock (600 shares)		60,000

(2) The books have not been closed but all adjusting entries which the company expects to make have been posted. Their trial balance shows a $15,000 net profit for the year.
(3) *Selected Ledger Accounts*

Surplus

8/ 6/56	CD62	$ 160	12/31/55	Balance	$52,960
10/10/56	J34	10,000	4/29/46	CR8	200
12/31/56	J40	3,000			

(*Note: The balance at 12/31/55 agrees with last year's working papers and represents the net difference over the years between credits from the profit and loss account and debits for dividends.*)

Inventory reserve

9/26/56	CD78	$ 500	6/30/56	J19	$ 5,000
			12/31/56	J40	3,000

(4) *Analysis of Selected Cash Receipts*

Date	*Page*	*Account credited*	*Explanation*	*Amount*
4/29/56	8	Capital stock	Sold $100 par stock @ $102	$10,000
		Surplus		200
10/10/56	20	Building	See J34	20,000

(5) *Analysis of Selected Cash Disbursements*

Date	*Page*	*Account debited*	*Explanation*	*Amount*
8/ 6/56	62	Surplus	Freak accident to company truck not covered by insurance; repair by Doe & Co.	$ 160
9/26/56	78	Inventory reserve	Purchase of materials (X Co.) to be used on orders taken prior to 6/30/56. $500 is	500
		Purchases	price increase since 6/30/56.	6,300

(6) *Selected Entries in General Journal*

Date	*Page*	*Entry and Explanation*	*Debit*	*Credit*
6/30/56	19	Inventory loss (P & L)	$ 5,000	
		Inventory reserve		$ 5,000
		Provision voted by Board of Directors for estimated future price increases in materials needed to complete orders on hand. (*Note: Orders do not represent contractual obligations.*)		
10/10/56	34	Reserve for depreciation	50,000	
		Surplus	10,000	
		Building		60,000
		Sale of main office bldg., moved to rental quarters downtown. (See CR20)		
12/31/56	40	Surplus	3,000	
		Inventory reserve		3,000
		Provision to value materials inventory at lower of cost or market in accordance with company pricing policy.		
		Cost $30,000		
		Market 28,000		
		$ 3,000		

You are to prepare the following in good form:

a. Schedule of recommended adjusting entries to be placed on the books to state the Stockholders' equity accounts in accordance with accepted accounting principles.
b. Statement of Retained earnings for 1956.
c. Stockholders' equity section of balance sheet.

Number 6

The Investment Company was organized on October 1, 1956, with an initial investment of $100,000 in common capital stock of $10 par value.

The corporation's charter authorizes it to buy and sell real estate in its own name (not a real estate dealer) and to buy, hold and sell mortgages.

Transactions for the year ended September 30, 1957 were as follows:

Purchases and Sales of Real Estate

Deal No.	*Date purchased*	*Total cost*	*Date sold*	*Sale price*	*Down payment*	*Collected on mtg. to 9/30/57*
101	10/5/56	$ 9,000	11/15/56	$12,000	$1,000	$ 800
102	11/9/56	8,000	1/10/57	12,000	3,400	600
103	12/1/56	11,000	3/15/57	16,000	2,200	13,800*
104	12/4/56	5,500	5/10/57	10,000	2,000	600

* The land contract received on deal 103 was subsequently sold by The Investment Company to an individual investor for $10,700. At that time the unpaid mortgage amount was $13,400.

Land contracts (mortgages) were given to the company by the purchaser of the property for the difference in the sales price and the down payment at the time of completing the deal. The ordinary life of a land contract is 10½ years.

The Investment Company assumed existing mortgages at the time of purchasing three of the properties as follows:

Deal No.	*Mortgage assumed on purchase*	*Unpaid balance 9/30/57*
101	$5,500	$5,200
102	3,500	3,250
104	3,150	(see below)

When deal 104 was sold on May 10, 1957 the purchaser bought it subject to the existing mortgage, which at date of sale had a balance due of $3,000. Therefore, the land contract which he gave to the company was only for $5,000. On deals 101 and 102 the company will have to pay off the mortgages before giving final title to the purchasers.

Transactions in Investments in Mortgages were as follows:

Mortgage No. 1—6% interest (5 years to maturity), face amount—$10,000
Purchased on October 1, 1956 for $8,000
Principal collected during fiscal year—$2,000
Sold on June 1, 1957 for $7,200

Mortgage No. 2—6% interest (2 years to maturity), face amount—$8,000
Purchased on December 1, 1956 for $7,040
Principal collected during fiscal year—$2,000

a. The company will use the *installment sales method* of accounting for its income and gain from real estate transactions.

(1) Compute the total deferred income on real estate as of September 30, 1957.

(2) Compute the income earned and gain or loss for the year on real estate transacactions. *Prepare all* computations in good form.

b. Determine the gains and income, other than regular interest, from the transactions in "Investments in Mortgages" for the year.

c. State how the taxable income for Federal income tax purposes would differ from the income reported to stockholders.

Solution to Problem 1

STATEMENT OF CAPITAL ACCOUNTS—PER BOOK

		A Capital	*B Capital*	*C Capital*	*Total*
Jan. 1, 1947	Contributions	$20,000.00	$30,000.00	$50,000.00	$100,000.00
1947–1951	Salaries	25,000.00	25,000.00	25,000.00	75,000.00
1947–1951	Remaining profits	1,666.67	1,666.67	1,666.66	5,000.00
		$46,666.67	$56,666.67	$76,666.66	$180,000.00
1947–1951	Withdrawals	15,000.00	15,000.00	15,000.00	45,000.00
Dec. 31, 1951	Balances	$31,666.67	$41,666.67	$61,666.66	$135,000.00
1952–1956	Salaries	25,000.00	25,000.00	25,000.00	75,000.00
1952–1956	Remaining profits	3,000.00	4,500.00	7,500.00	15,000.00
		$59,666.67	$71,166.67	$94,166.66	$225,000.00
1952–1956	Withdrawals	15,000.00	15,000.00	20,000.00	50,000.00
Dec. 31, 1956	Balances	$44,666.67	$56,166.67	$74,166.66	$175,000.00

CORRECTION OF PROFITS

	1949	*1950*	*1951*	*1952*	*1954*	*1956*
As stated	$18,000	$14,000	$16,000	$14,000	$20,000	$22,000
Inventory	*15,000	15,000	* 8,000	8,000		20,000
Depreciation	3,000				* 3,000	
Corrected	$ 6,000	$29,000	$ 8,000	$22,000	$17,000	$44,000

* Deduct.

STATEMENT OF CAPITAL ACCOUNTS—CORRECTED

		A Capital	*B Capital*	*C Capital*	*Total*
Jan. 1, 1947	Contributions	$20,000.00	$30,000.00	$ 50,000.00	$100,000.00
1947–1951	Salaries	25,000.00	25,000.00	25,000.00	75,000.00
1947–1951	Remaining profits	—	—	—	—
		$45,000.00	$55,000.00	$ 75,000.00	$175,000.00
1947–1951	Withdrawals	15,000.00	15,000.00	15,000.00	45,000.00
Dec. 31, 1951	Balances	$30,000.00	$40,000.00	$ 60,000.00	$130,000.00
1952–1956	Salaries	25,000.00	25,000.00	25,000.00	75,000.00
1952–1956	Remaining profits	8,000.00	12,000.00	20,000.00	40,000.00
		$63,000.00	$77,000.00	$105,000.00	$245,000.00
1952–1956	Withdrawals	15,000.00	15,000.00	20,000.00	50,000.00
		$48,000.00	$62,000.00	$ 85,000.00	$195,000.00

CORRECTING ENTRY

Inventory	$20,000.00	
A Capital		$ 3,333.33
B Capital		5,833.33
C Capital		10,833.34

To correct inventory for understatement at December 31 and to adjust capital accounts to the corrected balances.

Solution to Problem 2

		Dr.	Cr.
New income per books			$1,000.000
Depreciation—			
Declining balance ½ of 20% of $500,000		$ 50,000	
Claimed			25,000
Dividend received deduction		170,000	
Net operating loss deduction—			
Net operating loss for 1955	$2,185,000		
Carried back to 1953 and 1954	1,750,000		
Carryover to 1956		435,000	
Unallowable capital loss—			
Cost of capital stock	$ 125,000		
Proceeds from sale	75,000		50,000
Bad debts—			
Chargeoffs not allowable			7,200
Recoveries to be credited to reserve		2,100	
Returns and allowances—			
Provision to reserve not allowable			35,000
Charges deductible		32,400	
Carryover of contributions[1]		12,825	
Overstatement of ending inventory		65,000	
Accrued bonuses		25,500	
		$792,825	$1,117,200
			792,825
Taxable net income			$ 324,375

Tax on	$ 25,000 @ 30%	$ 7,500
Tax on	299,375 @ 52%	155,675
	$324,375	$163,175

Provision per books	$514,500
Federal Income Tax for 1956	163,175
Amount of adjustment	$351,325

Solution to Problem 3

PLANT NO. 1

The volume decreased from $300,000 to $200,000 (assuming there have been no changes in selling prices) thus the gross profit would decline 30% of $100,000 or	$30,000
In 1956 costs increased from 70% of sales to 80% of sales. This increase in costs would account for a decrease in gross profit of 10% of 200,000 or	20,000
Total decrease in gross profit, Plant No. 1	$50,000

PLANT NO. 2

The increase in the selling price of twenty cents per unit multiplied by the number of units sold in 1956, 11,000 will account for an increase in gross profit of	$ 2,200
The volume of goods sold in 1956 increased by 1,000 units. This volume increase multiplied by the 1955 gross profit per unit will account for an increase in gross profit of	4,000
The 1956 unit cost decreased sixteen cents. This decrease multiplied by the number of units sold in 1956 will account for an increase in gross profit of	1,760
Total decrease in gross profit, Plant No. 2	$ 7,960

[1] Total of 1955 and 1956 deductions ($18,025) is less than 5% of taxable income before special deductions.

Solution to Problem 4

(1)

(a)

Land		$103,000	
Land and building			$103,000
To set up the purchase of land in a separate account as follows:			
1/31/56 Original acquisition	$ 98,000		
2/28/56 Cost of removing building	1,500		
5/ 1/56 Legal fees	1,000		
6/ 1 56 Special assessment	2,500		
Total	$103,000		

(2)

Building		$105,600	
Land and building			$105,600
To set up the cost of building in a separate account as follows:			
5/ 1/56 Payment on contract	$ 35,000		
5/ 1/56 Legal fees	500		
6/ 1/56 Payment on contract	30,000		
6/ 1/56 Insurance during construction	100		
6/30/56 Salary of plant superintendant for supervision during construction	5,000		
7/ 1/56 Payment on contract	35,000		
	$105,600		

(3)

Land and building	$ 2,300	
Allowance for depreciation		$ 1,056
Depreciation expense		1,244

To set up separate account for depreciation allowance and to correct charge for depreciation

(4)

Organization expense	$ 500	
Insurance expense—1956	300	
Prepaid insurance	1,400	
Salaries	7,000	
Earned surplus	12,500	
Land and building		$ 21,700

To correct land and building account for items improperly charged thereto.

LAND

		Debit	Credit
Jan. 31, 1956	To acquire land and building for cash and stock	$ 98,000	
Feb. 28, 1956	Cost of removal of building	1,500	
May 1, 1956	Legal fees	1,000	
June 1, 1956	Special assessment	2,500	

BUILDING

		Debit	Credit
May 1, 1956	Partial payment—new construction	$ 35,000	
May 1, 1956	Legal fees	500	
June 1, 1956	Partial payment—new construction	30,000	
June 1, 1956	Insurance—during construction	100	
June 30, 1956	Salary—plant superintendent for supervision of construction	5,000	
July 1, 1956	Partial payment—new construction	35,000	

ALLOWANCE FOR DEPRECIATION

		Debit	Credit
Dec. 31, 1956	1956 provision for depreciation (1% of $105,600)		$1,056

(b) On the balance sheet under the heading of "Plant, property and equipment" or "Fixed Assets" the following should be shown:

Land, at cost		$103,000
Building, at cost	$105,600	
Less allowance for depreciation	1,056	104,544
		$207,544

Solution to Problem 5

(1)

	Debit	Credit
Surplus	$ 200	
Paid-in surplus		$ 200
To credit premium received on sale of stock to paid-in capital.		

(2)

	Debit	Credit
Profit and loss	$ 160	
Surplus		$ 160
To charge cost of repairs to truck to Profit and loss		

(3)

	Debit	Credit
Purchase (Cost of goods sold)	$ 500	
Inventory reserve		$ 500
To charge purchase of 9-26-56 to that account.		

(4)

	Debit	Credit
Inventory reserve	$5,000	
Inventory loss (P & L)		$5,000
To reverse the entry of 6-30-56.		

(5)

	Debit	Credit
Surplus	$5,000	
Appropriation of surplus for possible future decline in inventory		$5,000
To give effect to the resolution of the Board of Directors.		

(6)

	Debit	Credit
Cost of goods sold	$2,000	
Inventory reserve	1,000	
Surplus		$3,000
To adjust the inventory reserve account to an amount necessary for a lower of cost or market valuation of the inventory and to correct the entry of 12-31-56 for the error of $1,000.00 in the computation.		

BLACK, INC.
STATEMENT OF RETAINED EARNINGS
YEAR ENDED DECEMBER 31, 1956

(b) Balance, December 31, 1955		$ 52,960
Net income for the year ended December 31, 1956		17,340
		$ 70,300
Loss on sale of main office building		10,000
Balance, December 31, 1956:		
Appropriated for future inventory losses	$ 5,000	
Unappropriated	55,300	60,300

(c)

Capital stock, 600 shares, par value $100.00 per share		$ 60,000
Paid-in surplus		200
Earnings retained in the business:		
Appropriated for future inventory losses	$ 5,000	
Unappropriated	55,300	60,300
		$120,500

Solution to Problem 6

(a) (1)

	Deal 101	*Deal 102*	*Deal 103*	*Deal 104*	*Total*
Sales price	$12,000	$12,000	$16,000	$10,000	$50,000
Cost	9,000	8,000	11,000	5,500	33,500
Total gross profit	$ 3,000	$ 4,000	$ 5,000	$ 4,500	$16,500
Gross profit percentage	25	33⅓	31¼	64.29*	—
Collections	$ 1,800	$ 4,000*	$16,000	$ 2,600	$24,400
Realized gross profit	$ 450	$ 1,334	$ 5,000	$ 1,672	$ 8,456
Deferred gross profit	$ 2,550	$ 2,666	—	$ 2,828	$ 8,045

* See notes below.

NOTES

Under the installment method, the amount of gain to be reported in any given year is the proportion of the installment payments actually received in the year which the gross profit bears to the total contract price. On a sale of mortgaged property the amount of the mortgage (whether the property is sold subject to the mortgage or the mortgage is assumed by the purchaser) is included as part of the selling price (to determine whether the 30% test has been met) but it is not part of the contract price (amounts to be collected from the purchaser).

Since the collections on Deal 102 during the taxable year ended 9-30-57 were in excess of 30% of the selling price, this transaction cannot be treated as an installment transaction for tax purposes.

(a) (2)

Realized gross profit, as above	$8,456
Discount allowed on sale of contract on Deal 103	2,700
	$5,756

(b)

Mortgage #1		
Sale	$7,200	
Collections	2,000	
Total	$9,200	
Cost	8,000	
Gain on sale		$1,200
Mortgage #2		
Accumulated discount from date of purchase, December 1, 1956, to September 30, 1957 at $40.00 per month		400
Gain on mortgage transactions		$1,600

(c)

As indicated in the note above the taxable income will be greater than that reported to stockholders by $2,666.00 the deferred gross profit on Deal 102 which for tax purposes must be regarded as realized gross profit.

AUDITING

R. K. Mautz

The auditing section of the November, 1957 Uniform C.P.A. Examination was given Thursday morning, November 7 from 9:00 A.M. to 12:30 P.M. It includes two groups of questions as follows:

	Estimated Minutes	
	Minimum	*Maximum*
Group I (Four required)		
Numbers 1 through 6	75	100
Group II (All required)		
Number 7	17	25
Number 8	30	45
Number 9	28	40
Total for examination	150	210

The estimated time allowances are approximately proportional to the point value of the problems, the total of which for this examination is 100.

Number 1

The following auditing procedures are customarily applied in connection with the verification of cash balances or the testing of cash transactions. Indicate a type of irregularity which could be expected to be disclosed by the application of each procedure and *explain* how the procedure would disclose the irregularity.

a. Verification of the composition of deposit slips.

b. Comparison of deposits as shown by the bank statement for several days prior to the end of the period under examination with receipts as shown by the cash book.

c. Comparison of checks returned with the next subsequent bank statement to the bank statement and to the list of checks outstanding as of the date of the bank reconciliation.

d. Reconcilement of cash receipts by months as shown by the cash book with deposits as shown by the bank statements.

Answer 1

a. The expression "verification of the composition of deposit slips" could refer to a comparison of the details on authenticated deposit slips obtained from the bank with details of cash receipt book entries or to obtaining authenticated copies of the deposit slips from the bank to compare with deposit slips on hand. If the former interpretation is intended, "lapping" is one irregularity that could be disclosed through this verification procedure. Any failure of detailed credits to customers in the cash receipts book to agree with checks listed on the deposit slip would indicate that credit for a given check had been misapplied in the cash receipts book, presumably to cover a shortage.

If the latter meaning is intended, any attempt to support fictitious or irregular entries in the cash receipts book by faked deposit tickets would be disclosed when the authenticated slips differed from those on file in the office.

b. The restoration of funds just before the end of the period to cover a shortage in cash on deposit caused by earlier "borrowing" of recorded cash would be discovered because deposits per bank statement would be in excess of receipts per cash receipts book for the day or days in question.

c. The understatement or omission of an outstanding check or failure to record a check issued but not paid by the bank before the end of the year would be disclosed because the check

as paid by the bank and returned with the bank statement would not agree with the check as shown on the reconciliation if understated and would not appear on the reconciliation if omitted or unrecorded.

d. Any failure to deposit cash received and recorded within the month it was entered in the cash book would be disclosed because the deposits could not be reconciled with cash receipts book totals for that month. Similarly, deposit of cash in one period received and entered but not deposited in a prior period, or deposited to cover a shortage caused in other ways, would make reconcilement of bank deposits and book receipts impossible.

Number 2

The A.B.C. Company has followed the practice for many years of cutting off sales as of the 25th of the month. As of December 31, 1956 the company decided to cut off sales as of the last day of the month rather than as of the 25th of the month.

a. If the effect of the foregoing change in accounting practice on 1956 net income is deemed to be not material:
   1. What would be your recommendation to the company as to disclosure in the financial statements or the footnotes thereto? If any disclosure is desirable, suggest the exact manner and wording you would propose.
   2. What would you say with regard to this change in accounting practice in your short-form report? *Explain.*

b. If this change in accounting practice is deemed to have a material effect on 1956 net income:
   1. What would be your recommendation to the company as to disclosure in the financial statements or the footnotes thereto? If any disclosure is required, suggest the exact manner and wording you would propose.
   2. What would you say with regard to this change in accounting practice in your short-form report? *Explain.*

Answer 2

a. 1. If the effect of this change on net income is deemed to be not material, the necessity for any disclosure would rest upon its materiality with respect to financial condition, i.e. inventory and receivables. If there is no material distortion of these items, no disclosure would be necessary either in the financial statements or in the notes thereto. However, if the change were sufficiently material to affect comparisons of sales and cost of sales figures, a footnote to the financial statements might be desirable somewhat as follows:

   > **Effective for the calendar year 1956, the company changed its accounting practice with respect to a closing date for recording sales from the twenty-fifth to the last day of the month. The effect of this change on net income and current assets is considered to be not material.**

   2. If the effect of the change is not material, no comment is required in the short-form report because the requirement of consistency in the application of accounting principles refers only to matters of sufficient importance to affect the fair presentation of results of operations and financial position.

b. 1. If this change in accounting practice is material, the company should disclose the fact of the change and its effect in a note to financial statements adequately cross-referenced to sales, receiva-

bles, and inventory in the financial statements. The note should read somewhat as follows:

"In previous years, sales for the period December 26 through December 31 of any calendar year were excluded from the results of operations of that year and included in the results of operations of the following year. Sales for the period December 26 through December 31, 1956 have been included as 1956 sales in the sales in the statement of income for 1956. This change in accounting procedure had the effect of increasing reported income for 1956 by the approximate amount of $———. It had the further effect of increasing reported accounts receivable by $——— and decreasing inventories by $———."

2. Inasmuch as the 1956 financial statements were prepared on a basis different in a material respect from that followed in previous years, the inconsistency must be pointed out in the opinion paragraph of the auditor's report somewhat as follows:

   " . . . on a basis consistent with the preceding year except for the change in procedure with respect to recognizing sales explained in note—to the financial statements, which change we approve."

   The last phrase ("which change we approve") is not required but is commonly included.

Number 3

a. You are engaged in the conduct of an examination of the financial statements of a central school district. The district has an elected treasurer and clerk of the Board of Education who is appointed by the Board. Each of these officers keeps independent accounts with regard to the monies received and with regard to disbursements authorized from the school bank accounts. During the course of your examination you learn that the treasurer of the school district is manager of the local branch of a bank, and that the clerk of the Board of Education is one of the principal employees in the same branch of the bank. You have sent to this bank in which various accounts are carried for the school district your regular form for confirmation of bank balances and for confirmation of liabilities, and they have been received back by you properly filled out and signed for the bank by its manager, who also is the treasurer of the school district.

   All information in the confirmations appears to be correct in accordance with the records which you are examining.

   Discuss the value of these confirmations in these circumstances. What further steps, if any, would you take with regard to these confirmations?

b. The cashier of a bank is also treasurer of a local charity. He is authorized to purchase $10,000 U. S. bonds for the bank and a similar amount for the charity. He makes both purchases but misappropriates the bonds belonging to the charity. When an audit is made of the charity, the treasurer borrows the bonds from the bank and places them in the charity's safe deposit box.

   What internal controls would you recommend for the charity to prevent the occurrence of this manipulation?

Answer 3

a. From the standpoint of evidence sufficient to convince an alert auditor of the reliability of the school district records, these confirmations are worth very little. Technically, the auditor

has requested an outsider, the bank, to confirm the amounts in the school district records, actually the confirmation is not independent and worth little as evidence.

If feasible, new confirmation requests should be prepared, taken to the bank personally, and given to someone in the bank bookkeeping department other than the school district treasurer or clerk. The auditor should wait while the confirmation is completed and observe whether the people in question have any part in its completion. If this is not feasible because the branch bank is very small or for any other reason, the confirmation requests should be sent to the bank's head office with a full and frank explanation of the situation and a request that someone other than the men involved be asked to complete them. It is likely that the bank officers will be as interested in this unusual situation as the auditor, and it would be desirable to bring the facts to their attention.

b. The charity should provide that access to its safe deposit box be permitted only on the signature of at least two officers. Securities purchased should be recorded as to certificate numbers and other details of cost, par, interest rate and dates, etc. by someone other than those who have access to the safe deposit box. Securities purchased by the treasurer should immediately be turned over to others for deposit in the safe deposit box. Periodic surprise counts and a strict accounting for all income that should be received should be carried out by officers or employees who do not have access to the bonds.

Number 4

A and B form a corporation and transfer to it oil leases owned by them equally for which they had paid $30 in capitalized fees. They had also paid $1,280 for delay lease rentals which they had charged to expense in the year paid by them as individuals. The transferor stockholders had no other costs or expenses applicable to these leases. At the time of the transfer there were favorable geological and geophysical reports on the property but there had been no production in the area. The board of directors of the new corporation issued $300,000 par value common stock for the leases, one-half of the stock going to A and one-half to B. A and B donated concurrently one-half of their respective shares to the corporate treasury to be sold at par for working capital.

a. Discuss the proper balance sheet presentation of the leases and of the capital and donated stock.
b. What would be the basis of the leases to the corporation for income tax purposes?
c. What audit procedures would you apply to the leases?
d. Must this stock issue be reported or registered with the S.E.C.? *Explain.*

Answer 4

a. The leases should be shown as noncurrent assets at cost to the corporation. In the absence of actual fraud in the issuance of shares for the leases, the judgment of the board of directors as to the value of consideration received for the shares is conclusive. It is sometimes argued that the donation of stock should be used to reduce the carrying value of the leases, in this case to $150,000. This is desirable if the company accepts the adjustment, but in view of the provisions of some state business corporation acts cannot be considered required.

As the common stock apparently was issued as fully paid (no discount is mentioned), the capital section of the balance sheet should show

$300,000 of common issued. The donated stock can be deducted from stock issued at cost (zero) or at par, in which case a donated surplus of $150,000 would be created.

A note to the balance sheet explaining the valuation of the leases and the source of the treasury stock is desirable.

b. The basis of the leases for income tax purposes should be the same as their basis in the hands of A and B as individuals because the transaction by which the corporation acquired them was a taxfree exchange. In this case, basis of the leases to the corporation is $30.

c. The leases should be examined as to propriety, the corporation should be indicated by endorsement or otherwise as possessing the beneficial interest therein. Opinion of the corporation's legal counsel should be obtained with respect to the corporation's rights under the leases. Minutes of the meeting of the board of directors authorizing acquisition of the leases should be examined and the propriety of the recorded transaction determined. Examination of geological and geophysical reports should be undertaken, and, if phrased in technical language, a layman's interpretation requested.

d. This stock need not be registered with the S.E.C. because the amount to be issued is less than $300,000. Consultation with the local office of the S.E.C. is frequently desirable even for exempt issues.

Number 5

The auditing short-form report usually contains a sentence like this: Our examination was made in accordance with generally accepted auditing standards and included all auditing procedures which we considered necessary in the circumstances.

a. Distinguish between auditing standards and auditing procedures.
b. Quote or state in your own words *four* generally accepted auditing standards.

Answer 5

a. Auditing standards are measures of performance or guides for judging the adequacy of an examination. They are statements indicating the competence, training, and skill required in the performance of an audit if it is to be considered satisfactorily professional in scope and execution.

Auditing procedures are the specific steps by which evidence is obtained in a given situation. The confirmation of accounts receivable, the reconciliation of bank accounts, the examination of documents supporting charges to a given account, and reconciliation of cash receipts and disbursements per books with deposits and disbursements per bank are illustrations of audit procedures.

b. General Standards

1. The examination is to be performed by a person or persons having adequate technical training and proficiency as an auditor.

2. In all matters relating to the assignment an independence in mental attitude is to be maintained by the auditor or auditors.

3. Due professional care is to be exercised in the performance of the examination and the preparation of the report.

Standards of Field Work

1. The work is to be adequately planned and assistants, if any, are to be properly supervised.

2. There is to be a proper study and evaluation of the existing internal control as a basis for reliance thereon and for the determination of the re-

sultant extent of the tests to which auditing procedures are to be restricted.

3. Sufficient competent evidential matter is to be obtained through inspection, observation, inquiries and confirmations to afford a reasonable basis for an opinion regarding the financial statements under examination.

Standards of Reporting

1. The report shall state whether the financial statements are presented in accordance with generally accepted principles of accounting.

2. The report shall state whether such principles have been consistently observed in the current period in relation to the preceding period.

3. Informative disclosures in the financial statements are to be regarded as reasonably adequate unless otherwise stated in the report.

4. The report shall either contain an expression of opinion regarding the financial statements, taken as a whole, or an assertion to the effect that an opinion cannot be expressed. When an over-all opinion cannot be expressed, the reasons therefor should be stated. In all cases where an auditor's name is associated with financial statements the report should contain a clear-cut indication of the character of the auditor's examination, if any, and the degree of responsibility he is taking.

Number 6

Archer Department Store, Inc., uses the retail inventory method. It takes a complete physical inventory at selling prices at the close of its year as a basis for recording shortages.

Outline briefly a program of examination for the merchandise inventory of Archer Department Store, Inc., in connection with a regular annual audit.

Answer 6

Review in advance company's instructions and program for physical inventory. Satisfy yourself that, if followed, a satisfactory inventory will result, or discuss recommended improvements with company officials.

Be present when physical inventory is taken. Observe procedures followed and form an opinion as to reliability of counts. Observe control over inventory tags or other basic count record. Make test counts taking particular care to get rate of mark-up (department code, etc.) as well as description and quantity recorded.

Obtain copy of physical inventory listings. Trace test counts, including mark-up percentages, into inventory lists. Also trace a representative portion of company's inventory tags into final inventory listings.

Test purchases and sales cut offs. Trace adjustments of detail inventory records to physical counts and investigate material differences. Make tests of clerical accuracy of inventory compilation (extensions, footings, forwarding of page or section totals to summaries, etc.).

Determine existence of any consigned merchandise, inventory stored elsewhere (confirm), and any similar matters affecting the inventory. Review company's calculation of final inventory by the retail method. Compare inventory at sales price as computed with inventory at selling price as determined based on physical inventory counts. Obtain explanation of any substantial differences.

Test material mark-ups, mark-downs, mark-up cancellations, mark-down cancellations, and other modifications of selling price to appropriate authorizations in company records. Determine that company is consistent with previous years in calculation of rate of mark-up to reduce inventory at selling price to cost. Satisfy

yourself that sales, purchases, opening inventory, and other figures used in the inventory calculation agree with the general ledger balances which your other audit work has verified.

Trace a number of items from the count sheets back to mark-up authorizations and from authorizations of price changes forward into the inventory listing to determine if authorized prices were used for inventory purposes.

Review detail inventory records for obsolete and slow moving items and discuss valuation with appropriate officials.

Obtain an appropriate inventory representation from the company.

Number 7 (Estimated time—17 to 25 minutes)

Your client, a distiller of alcohol, suggests that it is not necessary for you to observe the taking of physical inventories at his plants. He points out that the Treasury Department's Alcohol Tax Unit checks regularly on his inventories of raw materials, work in process, finished product and revenue stamps. Procedures followed by the Tax Unit's agents include auditing of production, sales and other reports and the taking of physical inventories at unannounced intervals. Your client maintains perpetual inventory records.

Assuming that you agree to the client's suggested restriction of the scope of your audit, answer the following two questions. (In each case, your answer should include a discussion of the specific effects of such restriction on your short-form report.)

a. Your review of such of the records of the tax audits as are available and your appraisal of the procedures employed in such audits convince you that the client's record of inventory quantities can be relied upon. Would you be justified in accepting such independent verification by a governmental agency in lieu of your own observation and in consequently giving an unqualified opinion? *Discuss fully.*

b. Your review of the tax audit records and procedures does not satisfy you that you would be justified in relying solely on that verification of quantities. What effects would your omission of observation procedures have on your short-form report? *Discuss fully.*

Answer 7

Extensions of Auditing Procedure (see Codification of Statements on Auditing Procedure) require observation of inventories where this asset represents a significant proportion of the current assets or of the total assets of the concern and where the procedure is both practicable and reasonable. If the procedure is practicable and reasonable and the auditor does not apply it, he must disclose the omission in the scope paragraph of his report. If he has satisfied himself by other means, he need not include a qualification in the opinion paragraph; if he has failed to satisfy himself, the opinion paragraph must be qualified.

a. If the independent verification by the governmental agency is such that you feel you can rely on the client's inventory records, the scope section of the report would require qualification, but the opinion paragraph would not. However, there may be a question whether Rule 6 of the Rules of Professional Conduct has been observed. It can be argued that a substantial portion of the examination has been entrusted to someone who does not meet the requirements of the rule. If, however, the tax audit is viewed as a feature of internal control, no violation of Rule 6 is implied.

b. If the auditor is not satisfied that the inventory quantities are reliable and omits observation of the inventory, he must qualify both the scope and

opinion paragraphs as required by Extensions of Auditing Procedures. If the amount involved is significant enough to negate any opinion on the financial statements taken as a whole, the auditor must specifically disclaim such an opinion and give instead a "piece-meal" opinion as to other assets, liabilities, and income statement accounts.

Number 8 (Estimated time—30 to 45 minutes)

You have been engaged by the Louis Research Corporation to make an examination of the balance sheet of the Rogers Corporation as of December 31, 1956. Your client is considering the acquisition of the latter corporation by the purchase of its capital stock, and intends to use your report in connection with purchase contract negotiations. Furthermore, your client has stated that since the purchase has been motivated by the need for existing manufacturing facilities in a new marketing area, it is understood that your work under this engagement would be limited to that necessary to enable you to certify to the balance sheet but not to the statement of income and surplus.

This is the first time that the financial statements of the Rogers Corporation have been examined by independent public accountants.

A physical inventory will be taken by the Rogers Corporation as of the examination date.

Taking into consideration the fact that your certificate will only relate to the financial position of the company at December 31, 1956 and that you wish to do the *minimum amount of work needed:*

a. State what work, if any, should be done in respect to the following income and expense accounts for the year: (1) Sales, (2) Purchases, (3) Interest Expense, (4) Taxes, (5) Legal expense, and (6) Maintenance and repairs. *Give the specific reasons* for any procedures which you consider necessary.

b. State specifically what work, if any, should be done with respect to the balance sheet accounts at the beginning of the year. *Give the reason* for each procedure which you consider necessary.

Answer 8

a. (1) Sales. Sufficient review of sales transactions should be undertaken to assure the auditor that the basis on which sales revenue is taken up in the sales account is in accordance with generally accepted principles of accounting and is applied consistently. The possible variety in terms of shipment and sale require that care be exercised in the recognition of revenue so that receivables, inventory, and earned surplus may be stated correctly. Any sales guarantees, maintenance agreements, etc. must also be investigated to determine the possibility of real or contingent liabilities. Tests of the sales cut-off are necessary to determine whether receivables and inventory are stated correctly.

(2) Purchases. Sufficient review of purchase transactions should be made to assure that only merchandise purchases, rather than capital items, are charged to that account and that the basis on which liability for purchases is recognized is in accordance with generally accepted principles of accounting. Any special purchase contracts or commitments should be investigated for the possibility of contingent liability or loss. Tests of the purchases cut-off are necessary to determine whether payables and inventory are stated correctly.

(3) Interest Expense. All interest paid during the period should be re-

lated to specific liabilities of record. If this cannot be done, there is an implication that interest has been paid on an unrecorded liability. Reconciliation of interest expense for the period as computed from recorded liabilities with interest expense per the interest expense account is necessary to determine or verify the liability for accrued interest payable and any prepaid interest.

(4) Taxes. Taxes paid should be reviewed and tax bills examined to discover any taxes due but unpaid and not recorded as a liability. Communication with the Rogers Corporation's attorney may be desirable to discover the existence of any litigation re taxes or any contested items.

(5) Legal Expense. This account should be analyzed sufficiently to give the auditor an understanding and awareness of any legal problems pertaining to the ownership of assets or the existence or extent of liabilities. Such analysis gives him a basis for correspondence with attorneys and others regarding contingent liabilities and losses.

(6) Maintenance and repairs. This account (or accounts) should be analyzed sufficiently to determine that the company's practice with respect to charging repairs, etc. to this account (or accounts) is in accordance with generally accepted principles of accounting and is applied consistently. For example, extraordinary repairs or capital additions may have been charged to repairs and maintenance in error.

b. Certain balance sheet accounts such as cash, receivables, inventory, investments, deposits and advances, some prepaid items, and current liabilities are verified almost completely in any normal examination. Under the terms of our engagement with the Louis Research Corporation, no investigation of the beginning balance in these accounts is necessary providing our examination of year end balances is adequate. Other accounts such as fixed assets, fixed liabilities, capital stock and surplus accounts are not verified substantially in any single examination other than the first. For such accounts, a careful review of each is required. This review should be sufficient to establish that entries to the account since inception of the company have been made in accordance with generally accepted principles applied on a consistent basis. This will require examination of supporting evidence for at least all major entries in these accounts or for a representative number of such transactions. It will also require review of such related accounts as repairs and maintenance for the same period.

Number 9 (*Estimated time—28–40 minutes*)

The review of the system of internal control by an independent certified public accountant is fundamental in every examination of financial statements upon which he must express an opinion.

You have been engaged to examine the financial statements of a manufacturing company which pays all payrolls in currency.

a. State what questions you would ask in your review of the system of internal control and procedures relative to payrolls. (The answer may be in the form of an appropriate questionnaire.)
b. Give your reasons for asking the above questions, including an explanation of how you would use the questions in deciding on the effectiveness of the control over payrolls.

Answer 9

a. Who is responsible for authorizing the addition of names to the payroll? What records of interview, references, and initial employment are kept? Who authorizes rates of pay and subsequent changes? What review of employment practices is made by an internal audit or other department.

Who is responsible for authorizing separations from the payroll? What procedure is followed for reporting separations?

Are time clocks or other independent means used to record hours worked? Are records of hours worked approved by foreman or supervisor? Do overtime hours require special approval? If so, by whom?

Who prepares payrolls? What procedures are followed to eliminate errors of a clerical nature in hours worked, rates of pay, extensions, and footings? Are all deductions reviewed and approved? Is final payroll reviewed and approved before check is drawn for net payroll? If so, by whom?

Are distributions of payroll charges to expense and other accounts reviewed and approved? By whom? Is there any reconciliation of wages paid with production, cost, statistical, or other records? Describe procedure followed.

Who signs check drawing payroll funds? Who is in charge of filling envelopes? Is amount of cash available exactly equal to needs? What disposition is made of amounts over and short?

Who distributes pay envelopes to employees? Is this operation supervised? How do employees identify themselves? Are receipts obtained for envelopes issued? Are receipts compared with personnel files for validity of signatures? Is total of receipts reconciled with net pay?

What provision is made for unclaimed pay envelopes? Who has custody of unclaimed pay? How long are envelopes held before return to general cash? What procedure is required to claim envelopes after regular pay date?

Are payroll amounts reconciled with earnings reported to taxing authorities? Is there any rotation of payroll personnel among various duties?

b. These questions are asked for the purpose of determing whether or not determination and distribution of pay to employees are carried out effectively and with a minimum of errors and irregularities. The auditor is interested in the use of mechanical proof devices, cross-checks, and approvals that tend to limit the possibility of clerical and unintentional errors. He is also interested in sufficient separation of duties and review of work done to assure that intentional irregularities are both unlikely and sure to be discovered in the ordinary course of work.

In deciding on the effectiveness of internal control, the opportunity for error or manipulation by any one individual is the primary question. Can anyone obtain or intercept funds and either cover his defalcation by manipulation of records or approvals or go undiscovered because his work is not subject to adequate review?

If it is found that opportunities for error or irregularity are present, recommendations for improvement should be made and the audit program should be modified appropriately.

ASSOCIATION NOTES

E. Burl Austin

(Editor's Note: Readers of this section are urged to send items eligible for inclusion in these columns to E. Burl Austin, Oklahoma State University, College of Business, Stillwater, Oklahoma. At intervals a routine request is mailed asking for this information, but readers need not wait for these communications.)

DISTRICT OF COLUMBIA

Strayer College of Accountancy

Eric Daenecke has taken a leave of absence to accept an assignment with the Point IV program as Commercial-Industrial Accounting Advisor to Iran.

ALABAMA

University of Alabama

Paul Garner attended the Eleventh International Congress on Management in Paris, and the Seventh International Congress of Accountants in Amsterdam. He served as head of the delegation from the American Accounting Association.

William Flewellen received the Ph.D. degree from Columbia University in June and is spending the fall term on leave with Tennessee Coal and Iron Division of U. S. Steel Corporation. He has been promoted to the rank of professor.

Joseph E. Lane spent the past summer with the General Accounting Office Faculty Residency Program in Washington. He has been promoted to the rank of professor.

A. J. Penz attended the Case Seminar Program at the Harvard Business School during the summer.

Percy Yeargan received the Ph.D. degree from this university in June, and was appointed assistant professor.

Donald Mills was promoted to assistant professor.

Fred Brett was appointed instructor.

Victor Harrison has been appointed editor of *The Alabama C.P.A.*

William Whitney has been elected president of the Tuscaloosa Chapter of the Alabama Society of CPAs.

Thomas Humble has become an associate member of the Alabama Society of CPAs.

Grady Fullerton has resigned to accept the position of Comptroller, City of Birmingham.

The Department of Accounting is conducting an experiment in teaching elementary accounting over closed circuit T.V. Joseph E. Lane is directing the project.

Paul Garner recently addressed the National Association of CPA Examiners at their annual meeting in New Orleans in October.

ARKANSAS

University of Arkansas

Walter B. Cole spent the summer on a project for Carter Oil Company at Tulsa. The project related to distribution of overhead costs to oil leases, utilizing electronic data processing.

James M. Owen, of Louisiana State University, was a visiting professor on this campus during the summer.

New additions to the staff are as follows: Paul La Grone, associate professor, from Pan American College; Jess L. Rhodes, from Harding College, and Ivan Hall, of this university.

CALIFORNIA

University of California, Los Angeles

Ira N. Frisbee has retired from the faculty.

William G. Rodger of Victoria University College of Wellington, New Zealand is a visiting professor on the faculty during the current semester.

Richard F. Peirce has joined the faculty as assistant professor.

A. B. Carson has been appointed Accounting Area Chairman in the Department of Business Administration.

COLORADO

University of Denver

The university was host in September to the Seventh Annual University of Denver Tax Institute.

FLORIDA

University of Florida

The university was host in September to the Eighth Annual Graduate Accounting Conference sponsored jointly with the local chapter of Beta Alpha Psi and the Florida Institute of CPAs.

John S. Almeida is the new faculty vice-president of Beta Alpha Psi.

D. D. Ray has received his Ph.D. degree, has been promoted to associate professor, and during

the past summer served as consultant to the General Accounting Office.

MARION CARSON has received his Florida CPA certificate.

L. J. BENNINGER has been appointed associate professor of accounting after serving for a time as visiting professor.

ROBERT STERLING, formerly of the University of Denver, has been appointed instructor.

ROBERT DINMAN has returned to the staff from a leave of absence spent as visiting professor under the Fulbright program at the University of Ceylon.

HARVEY T. DEINZER was recently admitted to the Florida Bar and was a participant during the summer in a seminar at Carnegie Institute.

MALCOLM L. PYE resigned his position to begin duties with Bethlehem Steel Corporation.

WILLIAM H. ANDERSON resigned to accept a position with Huntington College.

ILLINOIS

Northwestern University

GEORGE W. COLLINS has been appointed chairman of the department.

Southern Illinois University

MARY BARRON resumed her duties on the faculty after spending the past year working as Assistant Auditor of Public Accounts, State of Kentucky.

EMERSON C. ERB has been granted a year's leave of absence to continue his work on a Doctorate at Indiana University.

De Paul University

RICHARD J. BANNON has been promoted to the rank of associate professor.

EDWIN COHEN has been promoted to the rank of assistant professor.

ROBERT H. ENGLE and WILLIAM J. LAUF have joined the faculty with the rank of associate professor and instructor, respectively.

University of Illinois

G. E. LUKAS, N. D. WAKEFIELD and W. E. THOMAS have been promoted to the rank of professor.

G. D. BRIGHTON and A. R. WYATT have been promoted to the rank of associate professor.

H. P. HOLZER has been promoted to the rank of assistant professor.

H. E. ARNETT, C. G. AVERY, J. G. BARNHILL, and R. L. MCGARVEY have been promoted to the rank of instructor.

H. E. BREEN has been granted a second year's leave of absence to continue working in the General Accounting Office on a training and recruiting program.

D. H. SKADDEN is on leave this year working with Haskins & Sells in Chicago.

N. D. WAKEFIELD has been reappointed editor of *The Illinois Certified Public Accountant.*

R. L. DAVISON, H. P. HOLZER, GEORGE MEAD, and R. E. SCHLOSSER have passed the Illinois CPA examination. MEAD received the Illinois gold medal.

C. H. GRIFFIN has joined the staff as associate professor. Other new staff members in the grade of instructor are J. W. GIESE, J. O. LANGE, and M. W. WINGFIELD.

N. M. BEDFORD has been named president of the Sangamon Valley Chapter NAA.

H. H. BAILY died at his summer home at Ely, Minnesota in September. He had retired recently after 39 years of service.

INDIANA

Butler University

G. FRED WEBER assumed duties as associate professor, coming from Montana State University.

FELIX P. KOLLARITSCH has been promoted to the rank of associate professor.

Indiana University

DAVID W. THOMPSON has resigned to become a partner of Peat, Marwick, Mitchell & Co., New York.

R. B. MCCOSH has resigned to return to the University of Denver.

LEON E. HAY has been promoted to associate professor.

CHARLES H. SPENCER attended the summer Case Seminar Program of the Harvard Graduate School of Business Administration.

IOWA

Drake University

Two additions to the staff are ROGER W. BRIGGS, as associate professor, coming from Grinnell College, and RICHARD G. PEEBLER as assistant professor.

RUEBEN W. WAGNER has resigned from the staff.

M. B. DILLEY spent the summer serving as visiting professor of accounting at the University of Utah in Salt Lake City.

KANSAS

University of Wichita

The university will be host in April to the Third

Annual Petroleum Accounting Conference. The event is jointly sponsored by the Wichita Chapter of the Kansas Society of CPAs, the Petroleum Accountants' Society of Kansas, and the Wichita Chapter NAA.

KENTUCKY

University of Kentucky

ROBERT D. HAUN attended the DuPont Symposium in Wilmington, Delaware during the month of June.

WENDELL E. BEALS spent the month of August at Williams College in Massachusetts participating in a faculty seminar.

WILLIAM W. ECTON has joined the teaching staff as instructor. He was a senior accountant on the staff of the St. Louis office of Arthur Andersen & Co.

MICHIGAN

Michigan State University

New appointments include ROBERT L. KVAM, assistant professor, and as instructors, the following: ELMER ANTTONEN, EDWIN BALTIMORE, WILLIAM L. FERRARA, G. EDWARD PHILIPS, and NORMAN STANTON.

Resignations include MISS MARIE DUBKE, who resigned to join the staff of Touche, Niven, Bailey & Smart, and CHARLES P. WOODS who resigned to join the faculty of the University of Nevada.

J. W. RUSWINCKEL has been reappointed chairman and C. LAWRENCE was reappointed as a member of the Professional Education Committee of the Michigan Association of CPAs.

J. D. EDWARDS has been appointed to the Accounting Principles and Auditing Procedures Committee of the Michigan Association of CPAs.

MISSISSIPPI

Mississippi State College

VARDAMAN VANCE passed the CPA examination in May.

W. L. CROSS joined the staff as assistant professor in September.

MISSOURI

University of Missouri

New faculty appointments are WESLEY E. BALLSRUD, assistant professor; RALPH M. HOGAN, lecturer, JAMES E. HOLSTEIN, assistant professor, and RALPH E. SKELLY, assistant professor.

MONTANA

Montana State University

DONALD J. EMBLEM is on a two-year leave of absence teaching at the University of The Punjab in Pakistan.

DORSEY E. WISEMAN has joined the staff as associate professor. He had been at the University of Nebraska before coming to Montana.

RICHARD C. MCALLISTER has joined the staff as assistant professor, coming from the University of Seattle.

CHARLES F. ANGEL has joined the staff as instructor after serving two years in the U. S. Army.

NEW JERSEY

Fairleigh Dickinson University

HARRY W. SANDHUSEN, JR., has been chosen by the Paterson Chapter NAA to receive their most valuable member award for the current year.

NEW YORK

Long Island University

PHILIP WOLITZER received a plaque from the Student Accounting Society for his valuable contributions to the student body and to the profession.

The following members are serving with the New York State Society of CPAs: LEO SCHLOSS, Committee of Education and Personnel, and PHILIP WOLITZER, Committee on Admissions and Administration of Accountant's Practice.

OHIO

John Carroll University

IRVING K. CHRISTIANSEN has been appointed Director of the Department of Accounting and Statistics.

Miami University

BEN YAGER was awarded the D.B.A. degree by Indiana University in June.

RODGERS A. GERHARDT joined the staff as instructor.

Ashland College

PAUL E. SCHWARTZ has been named acting chairman of the Department of Business Administration.

University of Dayton

WILLIAM J. HOBEN was added to the staff in September.

GEORGE A. GUSTAFSON has accepted a position with the Federal Government.

OKLAHOMA

Oklahoma State University

E. T. SCHAUER has served during the past two

summers as consultant to Continental Oil Company, Ponca City, Oklahoma. SCHAUER spoke in April before the Petroleum Accountants Society of Oklahoma on the subject of "Employee Appraisal and Development."

C. A. BLACK has been promoted to assistant professor.

B. F. HARRISON attended the annual meeting of the American Institute of CPAs in New Orleans in October.

PENNSYLVANIA

Lehigh University

ROY B. COWIN retired in June, 1956 as head of the department and his duties were assumed by DEAN CARL E. ALLEN.

EUGENE C. HASSLER has been promoted to assistant professor.

FRANCIS M. BRADY, JR., has been promoted to assistant professor.

JAMES E. WERT resigned as assistant professor to accept a position as economist with the Federal Reserve Bank of Cleveland, Ohio.

WENDELL P. TRUMBULL, formerly of New York University, has joined the staff as professor of accounting.

CARL L. MOORE has been named program chairman of the Lehigh Valley Chapter, Pennsylvania Institute of CPAs.

The first annual accounting forum, in cooperation with other professional societies, was held on the university campus in November for students of the surrounding colleges and universities interested in a career in accounting.

TEXAS

University of Texas

JIM G. ASHBURNE presented papers before the Sabine Chapter NAA and a joint meeting of the Accounting Section, Southwestern Social Science Association, and the Regional American Accounting Association.

ROBERT T. TUSSING has been appointed professor of accounting and head of the Department of Business Administration, New Mexico Highland University.

R. E. SEILER, together with JIM ASHBURNE, conducted an oil jobbers management institute in Odessa, Texas in January, 1957.

New faculty appointments include KALO NEIDERT and PHIL MEYERS, Assistant Professor; GRANT CHANDLER, lecturer.

North Texas State College

N. G. SULLIVAN and FRANK ROSS passed the May CPA examination.

HORACE BROCK was the principal speaker at the Accounting and Finance Division of the Petroleum Institute in October in Dallas. His topic was "Suggestions for Reform in Petroleum Accounting."

GOYNE A. ROBASON joined the accounting staff in September.

WASHINGTON

University of Washington

KENNETH B. BERG and LAUREN M. WALKER have been promoted to the rank of professor.

WILLIAM E. COX has retired to the position of professor emeritus.

JAMES R. BENTLEY is devoting the current year to research under a Ford Foundation fellowship grant.

ROBERT M. SIMPSON, formerly a partner of Arthur Andersen & Company, has been appointed lecturer.

GENE E. ABLOTT has been appointed instructor of accounting.

WYOMING

University of Wyoming

DEAN M. C. MUNDELL has been selected as chairman of the Mountain States Conference of CPAs which will be held next June 16 through 19 at Jackson Lake Lodge, Wyoming. JEAN F. MESSER is to serve as chairman of the Editing and Publishing and Commercial Exhibits Committee.

BOOK REVIEWS

JAMES S. LANHAM, EDITOR

Accounting

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FINNEY AND MILLER, Principles of Accounting—Introductory .... B. C. Lemke 159
GILLESPIE, Cost Accounting and Control .... Norton M. Bedford 160
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Tax Planning Under the New Regulations .... C. Rollin Niswonger 170

Accounting

F. SEWELL BRAY, *The Interpretation of Accounts* (New York and London: Oxford University Press, 1957), pp. VIII, 215, $4.80).

First thoughts: The title of the book points to an aspect of accounting that is often neglected. The interpretative, analytical, informative potential inherent in capital-income accounting has not been explored very far. In accounting education these interpretative possibilities are seldom examined beyond a course in financial statement analysis. Yet, from indications of staff positions labeled "analyst," it is safe to presume that data buried in account categories are in some companies closely examined for informative interrelations of significance to management. A need exists for a literature in the interpretation of accounts to supplement the substantial literature of accounting technology and professional auditing. Perhaps this volume will be an item of this kind.

Now as to the book itself.

The author is both an accountant and an economist; his chapter 10 is titled "Auditing Theory" and chapter 9, "The Nature and Purpose of Direct Taxation." His strong interest in social accounts is reflected in chapter 11, "A Formal Review of Social Accounting." Chapter 2 is titled "The Formal Principles of Public Company Accounting." Since 1944 he has been author or co-author of nine books on various aspects of accounting. The two latest of these report on researches made while serving as Stamp-Martin Professor of Accounting.

The volume under review is published for the research committee of the Society of Incorporated Accountants, and carries a foreword by Bertram Nelson, president of the society. A first view of the objective of the book comes in this foreword. "The whole purpose of Professor Bray's book is to suggest that three viewpoints (about the purposes of accounts) can be reconciled. . ." The three divergent views are those of enterprise management, those indicated in the Companies Acts and tax legislation, and those of ". . . economists, who have discovered the merits of accounting technique as a method of analysis."

The chapters consist of eleven research lectures given between 1953 and 1955, for the most part before meetings of accountants. Other settings include student groups, economics and statistical societies, and the British Institute of Management. About one half of the book (110 pp.) is given over to four chapters titled "Accounting Dynamics." These present in considerable detail the author's present theme. Other lectures deal with some of the same materials, adapted to the particular audience then present. Sometimes the lectures seem designed to show to accountants the concepts of economists, others to show economists and statisticians something of the potentials of accounting technology.

Accounting dynamics, the author points out, ". . . can and should be looked upon as part of the general interpretation of accounts . . . Our primary purpose then is to consider those forms of differential accounts which promote business adaptability to change." (p. 41) "The essential task of accounting dynamics is the isolation and magnification of changes in accounting aggregates in order that we may study the changing economic pattern of an accounting entity." (p. 53) In the accompanying context he speaks of "those who engage in expectation accounting." This is for accounting a new term, perhaps, but not a new idea. The practice of industrial budgeting from its beginning a generation ago has dealt with "expectations;" the same could be said about standard cost. The phrase, however, very effectively indicates the direction of the author's interest.

American readers should be mindful of British use of the phrase "in the accounts." Usually the context will show that the reference is to some form of reporting accounting data—financial statements or schedules, we usually say. References to price-level adjustments "in the accounts" is more likely to mean "in the statements" than in the ledger categories.

The author gives little space to ratio analysis of financial statements—the most familiar approach to interpretation of account data. His emphasis is elsewhere. "We are principally concerned with accounting change." "Change, when it occurs, demands recognition and adaptability." "We are trying to analyse what is really happening behind those aggregate figures which appear in accounts, in order that we may bring about a wider use of the figures passing through the hands of accountants." (pp. 62, 63)

The approach he adapts to analysis of changes reflected by business enterprise data has some kinship to funds statement computations. He writes of "Sources, Earmarkings and Utilization of Funds" (p. 37), "Capital Change" (pp. 65, 161). Chapter 8, "Capital Changes," gives detailed attention to this analytical presentation. Section 1 of that schedule is called "Savings and Asset Formation," and includes on one side, "retained income," "earmarked income," "provision for depreciation" (cost allocation and price change adjustment are shown separately), "inventory price change adjustment," and a balance, "Excess Asset Formation." On the other side: net expenditures of fixed assets, change in deferred expenditures, change in total inventories.

Other analytical sections are titled "Gains and Losses," "Long-term Financial Changes," "Working Capital Changes," "Tax Adjustments and Change in Provisions." The last section is "Summary Account of Capital Changes," and includes, among others on the left, a final item, "asset value adjustment," on the right, "Capital Value Adjustment." For each side three money columns are provided: Indicated or Expected Standards of Change, Actual Changes, Differences. (p. 171) Here, as elsewhere in the book, a good deal of explanatory text accompanies the schedules.

In the details of the sections (except for items of adjustment for price change) the similarity to familiar accounting presentations is close. "The dynamic functioning of the entity became observable by analysing changes in the relationships among the details of the schedule." "The bi-lateral functions of capital change" are disclosed in the summary account. This summary

(p. 173) is arranged to show that "the positives and negatives (e.g. excess asset formation vs. excess saving; increase vs. decrease in working capital, etc.)" will always counterbalance to give a zero total. Some of the terminology and arrangement here seem designed more to make interpretation of capital changes understandable to economists than to accountants and management.

Numerous writers in THE ACCOUNTING REVIEW have evidenced dissatisfaction with the service that could be rendered by the usual funds statement. Professor Bray seems to have felt the same analytical deficiency and, drawing upon the approach used in social accounts, to have sought to show how to increase the analytical information to be made available.

Most of the material in the four chapters on accounting dynamics is used to present and explain an arrangement, in statement form, of enterprise operating data. Pro-forma statements, "a permissible minimum," are presented early (pp. 35–38); in chapter 4 and 5 (pp. 72–74 and 100–104) a detailed "Product Operating Account" is set up to permit comparing changes between the results of two periods.

The first section sets goods and outside services acquired for production ("input") in contrast with sales and change in inventory ("output") thus producing a debit balance forward of net output, i.e. "value added." The second section deducts from "value added," the sum of various operative and auxiliary labor costs, and selling and distribution salaries, thus producing a debit balance forward of "variable margin." The third section, the most detailed of all, comes to a remainder of "operating income" often deducting from "variable margin" certain costs (goods, services, labor) which do not vary with output, e.g. standing overheads, administrative and management costs, imputed or actual rents, depreciation of operating assets.

Here again some aspects of the arrangement and titles suggest a concern for making account data more understandable for economists' use in their own analytical computations. For example, the "value added" figure can easily be associated with external statistical data (census). The term "capital formation" probably will carry a broader connotation for economists than for management. The mention of imputed rent and the placement of depreciation charges in the calculation also seem directed more toward economic analysts than managerial analysts of production cost factors. The previously mentioned inclusion of price change adjustments for depreciation and inventories also tends to adapt the presentation to economists' use, particularly that involved in setting up schedules for social accounts.

In order best to serve this purpose, however, disclosures of this kind would need to be universally adopted and used in business. Manifestly this change would take a long time to bring about. Usually statutory provisions and established customs do not yield readily to the persuasiveness of new ideas or to the logic of changing conditions. It is not clear from information available here whether or not an earlier apparent hesitation on the part of British businessmen at publishing details of their operations has materially changed. It could be that the usual public disclosures of present-day operating details are considered by some observers still to be relatively incomplete and in need of voluntary expansion.

Last thoughts: The arts of interpreting account data do indeed need development. Since the early days of cyclical analysis, the ability of economists to extract significance from accumulated factual data has continued to grow. The development of "social accounts" is a more recent example. The research and analytical thinking back of the papers in this volume and beneath the author's other publications has been a worthy endeavor. Yet to this reviewer, because of his bias, no doubt, it seems likely that the overall influence of the best research and the most persuasive presentations in this area will show up in economics more clearly and sooner than in law, taxation, accounting or business.

This is not to say that businessmen, administrative accountants, and professional accountants are opposed to new analytical techniques. They have cooperated very well in the development of accounting to its present state of high usefulness, and they could obviously learn much from analytical economics. Nevertheless, they undoubtedly will be slow to accept modified procedures which could cloud the reviewability of the recorded financial fact of prior business decisions. Some of these data surely would be smothered if into ledger accounts were injected extraneous adjustments which would cause the modified figures to reflect results *as if* the enterprise had taken action it had not yet taken.

Professor Bray's book does not argue for injecting price-level change into the ledger, though other writers in their fervor for an economic type of realism, make it difficult to avoid the conclusion that they consider this kind of reform appropriate, and that they look at reaction against it as little more than mere traditionalism. As an accountant, this author will be well aware that more is involved than "traditionalism." One element likely to stand large in the mind of accountants would be suggested by the question: Would negative adjustments upon a down-swing of prices be equally acceptable if the positive adjustments which make up the present pattern of thought were now generally accepted?

In the service of informed enterprise management, calculated estimates of the impact of price level change could prove very useful indeed. So too could other types of economic analysis. And perhaps the time is close at hand when trained economic analysts should be on the staff of large business concerns. But to get these useful interpretative benefits, it is not necessary extensively to "reform" accounting technology itself.

Professor Bray writes as a realist well aware of both the accounting and economic point of view. As a realist, he does not reach for new accounting technology. At most his presentation stresses the thought that operating statements might well become more flexible, more revealing, more useful than merely to continue serving as a formal adjunct to audited balance sheets. It is clear he has in mind the needs of management as well as those of economic analysts. And perhaps he would agree

that no persuasive reason stands in the way of making effective use of collateral interpretative information in the event that reporting price adjustment effects in the formal financial statements also come to be considered objectionable.

Viewed in that light, the contribution of this book could be said to lie in the care and understanding the author shows in striving to make accounting ideas more understandable to economists, and the ideas of economic analysts more understandable to accountants and businessmen and others who usually have not had formal training in economics.

Accounting needs a body of logical theory to support and explain the objectives and limitations of its technical services. And it is clear that a good many ideas useful in the structure of accounting theory can be found in the literature of microeconomics. It seems less certain that accounting theory could benefit as much from ideas out of macro-economics where the methodology of social accounts has been derived partly out of accounting.

On the other hand, philosophical economics also has needs, particularly those related to techniques for bringing its reasoning powers to fruitful use in practical affairs. Econometrics and social accounts are instruments serving this need.

Because these needs exist, and because social economics and enterprise accounting are inescapably different disciplines, the research activities of this author and other thoughtful students should continue. Because economists and accountants will continue to think in different ways, it is well that some people try to improve mutual understanding between these groups. Out of understanding, each party may appropriately adapt ideas from the other with no thought of advocating modification of one discipline in order to satisfy the theory of the other.

It is fitting that the organized profession of public accounting should support such research and exchange of ideas; and it is particularly appropriate that a man who can see both economics and accounting should take up the task of moderator. Perhaps college classes in economics and accounting theory will in the long run prove to be the most important training ground for greater mutual understanding. Your reviewer strongly hopes that other dedicated teachers will appear who have had training in economics and accounting, and if possible, practical experience in contact with business.

It will be through research, writing, and exchange of ideas that the most satisfactory progress will come. The important thing after all is not whether index adjusted value or historical cost is theoretically the more significant. Both have a useful function. The thing which does matter to the future of accounting and enterprise management is whether and to what extent the interpretative modifications by application of price series indices of data out of business accounts will be set in analytical contrast with the recorded experience of exchange-priced transactions of the enterprise concerned—thus to help stimulate sound next decisions by its management. It is perhaps not too much to say that steadily improved decisions in business could conceivably contribute as much to society as would governmental policy rested upon analysis of social accounts for the nation.

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H. A. FINNEY AND HERBERT E. MILLER, *Principles of Accounting—Introductory* (Englewood Cliffs, Prentice-Hall, Inc., 1957, pp. xvi, 757, $6.95).

Nothing succeeds like success, so it comes as no surprise that another edition—the fifth—of Finney and Miller's Introductory has been issued. Apparently it was not intended to be a surprise; pages ix and x list about three score teachers who made suggestions for this new edition.

A comparison with the fourth edition shows that the number of chapters (28) and appendices (3) are the same, although the fifth edition adds a 17 page section headed "Summary and Review" which uses 21 audit adjustments resulting from a review of a hypothetical company's improperly prepared statements to illustrate the effect of violating accepted accounting principles as developed in the text. The topics of the appendices have not been changed; they still cover matters relating to payrolls, locating errors, and the preparation of monthly statements when books are closed annually.

The basic introduction to the accounting cycle is now covered in five chapters instead of four. The sequence of other traditional topics making up the first year of accounting course work has been improved in the new edition.

One of the more striking changes noticed by the reviewer has been the skillful reduction of space devoted to the more operational aspects of accounting. Reversing entries, for instance, are not covered at all and, in general, a greater degree of the "why" has been injected in place of the "how to." The reason, as stated in the preface, is to make the book more useful in courses which include students who do not intend to major in accounting. It is the apparent intent of the authors to make the Introductory volume also serve as a suitable text for a course which stresses the managerial usefulness of accounting rather than its practice. To help accomplish this expanded purpose the following chapters are added, which do not appear as such in the preceding edition: (ch. 24) the statement of application of funds, (ch. 25) accounting aids to management, (ch. 27) consignments, installment sales, and branches, and (ch. 28) consolidated statements. These topics cannot of course be treated in much more than an elementary fashion. Partly because these new topics are placed toward the end of the text and partly because a greater awareness of the managerial significance of accounting is desirable in any introductory text, the fifth edition will prove completely acceptable as far as usefulness in the beginning course for accounting majors is concerned. Discussion questions and problems are provided for the various chapters as well as transactions for partnership and corporation practice sets.

The new Introductory volume of the Finney and Miller series continues to emphasize, as have previous

editions, currently acceptable principles and practices of accounting. As expected, the present edition continues the tradition established in past books of the series to supply a text which reflects careful attention to the subject matter in both its broad and detailed aspects—the result is a thorougly reliable and teachable beginning text in accounting.

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Cecil Gillespie, *Cost Accounting and Control* (Englewood Cliffs, N. J. Prentice-Hall, Inc., 1957, pp. xv, 824, $7.95).

The function and scope of cost accounting has never been well set forth, either in the literature or by the practice of the discipline. Possibly because of this there tends to lurk in the minds of many accountants a "feeling" that cost accounting is cost bookkeeping and justifies itself only because it can give a valuation for inventory purposes. To them, cost accounting is a necessarily tedious and uninteresting aspect of accounting. While this view may have had some validity in terms of cost accounting as it was practiced fifteen years ago, since World War II developments in the field have been such as to suggest that a much broader view of cost accounting is appropriate. This new book by Professor Gillespie does much to dispel the older and inaccurate assumption, by providing a rather broad framework for the field of cost accounting.

The author points out that cost accounting includes cost bookkeeping, cost control, cost analysis, cost comparison and cost planning. He states, "Cost accounting is a set of procedures for determining the cost of a product and of the various activities involved in its manufacture and sale, and for planning and measuring performance." To develop this broad view the book is divided into four sections. Part One is directed to the problem of determining product costs by process and job cost systems, though the presentation is of such a nature as to suggest basic control aspects of cost accounting as well. About half of the book is devoted to this conventional aspect of cost accounting. Part Two is directed to cost control. In this section, about 190 pages are directed to standard costs and other methods for control of manufacturing, distribution, and general administration charges.

The remaining 180 pages of the book are devoted to the planning phase of business. Part Three emphasizes budgeting and comparative cost constructions to develop information useful to management in planning the future activities of a company. In this area break-even analysis and direct costing are tied in to the problem of business planning. A single chapter on "Cost Planning" represents Part Four. This one chapter is devoted to the problem of developing costs appropriate for various purposes and resolves itself into the process of developing a cost system. Three appendices provide "A Complete Set of Cost Control Reports," "Complete Budget for Benson & West Manufacturing Company" and an "Annotated Bibliography—Distribution Costs." Discussion and review questions, exercises, and problems follow each chapter.

The book appears to be an excellent textbook. The first two chapters provide definitions, scope and concepts of the field. Chapter three provides a review of basic accounting while covering the area of inventories and manufacturing costs. Job order costing is introduced in chapter four, after which the typical cost accounting topics are discussed in the usual manner. Budgeting is introduced in chapter 23 (Part Three) and three chapters cover, respectively, "Shipments, Production and Procurement Budgets," "The Facilities Budget; Expense Budget," and "The Financial Budget." In addition to the three chapters on budgeting, Part Three includes a chapter on "Cost-Volume-Profit Relationships; Direct Costing," a chapter on "Problems of Alternative Choice; Costs for Special Purposes," and two chapters on "Comparative Costs—Distribution." These seven chapters on planning will be appreciated by many instructors who have been searching vainly for more suitable material than that normally available in textbooks.

One is reluctant to be critical of a book which does provide additional scope and meaning to the field of cost accounting. But it should be observed that the textbook is much more devoted to an explanation of how to do specific procedures and only incidentally concerned with why a particular procedure has been adopted and what alternative possible procedures might be used. As a consequence the student is apt to be subjected to the view that the function of accounting is to teach that which is done in practice. Undoubtedly this is a most important function, but if progress in the field is to be sustained, it is imperative that future accountants, in the form of students, develop an inquiring attitude toward accounting problems. The exact combination of theory and practice which provides the most suitable accounting course is subject to a variety of opinion. It may be contended, of course, that textbooks should be confined to practice with the instructor providing the broader base for the subject.

Despite this one questionable reservation, which may be accepted as valid by some and rejected by others, the textbook represents a highly desirable addition to cost accounting and will, unquestionably, contribute to its development.

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Arthur W. Holmes, *Basic Auditing Principles* (Homewood, Illinois: Richard D. Irwin, Inc., 1957, pp. viii, 350, $6.00).

In the words of the author, *Basic Auditing Principles* "... is designed to fulfill the requirements of educational institutions offering a short, or one-semester, course in auditing, probably limited to three hours per week for the semester, or offering a two-semester course, and probably devoted to two hours per week for each semester." Although there is room for disagreement as to the need for any special text material to satisfy the course requirements described, in general Professor Holmes has done an excellent job of producing

a concise presentation of the important areas requiring coverage in an auditing textbook.

Since the major objective of this book is to cover the principal areas of concern to the independent auditor in a shorter space than other texts on this subject, a comparison of the length of *Basic Auditing Principles* with *Auditing: Principles and Procedures* by the same author may be revealing. *Basic Auditing Principles* contains seventeen chapters and 350 pages as compared with twenty-eight chapters and 808 pages in the 1956 edition of *Auditing: Principles and Procedures*.

The book is divided into three sections. The first contains four chapters dealing with the general matters relating to auditing, the auditor and the audit report, internal control and the audit program, audit working papers, and the examination of original records. The second section, representing the bulk of the book, includes eleven chapters concerned with the examination of balance sheet and income statement items. The completion of the audit engagement, including the auditor's responsibility for reporting events occurring subsequent to the balance sheet, and the legal responsibilities of the independent public accountant are included in two chapters comprising the third section.

The introduction of the audit report, both long and short-form, in the first chapter represents a desirable modification of conventional textbook arrangement. The student is exposed to the end product of an audit engagement at an early stage and, hence, is better able to appreciate the later discussion of specific audit objectives and procedures. The effect of the use of electronic data processing methods on auditing procedures is briefly examined in connection with the discussion of the examination of original records. A distinct shortcoming in this section is the lack of attention given to to the problem of deciding how much detailed work relating to original records and underlying documents is necessary to satisfy the auditor of the reliability of these data. No mention is made of the possibility of employing statistical concepts in this connection.

The chapters dealing with the examination of specific asset, liability, capital, revenue, and expense accounts follow a common pattern of organization. Each chapter is introduced by a brief description of the account to which the chapter relates and by an indication of the basic objectives which influence the choice of specific auditing procedures. Emphasis on objectives rather than on exhaustive listing of every auditing procedure which could possibly be applied represents an improvement over the author's previous textbooks in the field of auditing. Following the introductory section, the principal internal control considerations applicable to the particular item are examined and a sample internal control questionnaire presented. The major part of each chapter in this section relates to procedures employed by the independent public accountant to achieve the objectives previously mentioned. Illustrative working papers are liberally employed in this connection. While excessive listing of auditing techniques is generally avoided, increased attention to the reason for the use of a particular procedure rather than only a mention of the procedure would be desirable. In this way understanding of auditing procedures rather than mechanical memorization is enhanced. A brief presentation of financial statement standards, including classification and terminology, concludes each chapter in this section.

Considerable attention to the responsibility of the independent public accountant regarding post-balance sheet date events and the presentation of material relating to legal liability in a separate chapter are the principal features of the last section. Accountants' liability is a subject of substantial current importance to the profession and has received considerably less attention in American auditing textbooks than in their English counterparts.

Many readers of *Basic Auditing Principles* will be irritated by rather dogmatic statements relating to accounting principles or procedures. For example, on page 181 the author states that "Interest deducted in advance is a prepaid expense." On page 185, the statement is made that "Most accountants are of the opinion that organization expenses should be amortized as rapidly as possible. . . . The amortization should be properly timed, so that net income will not be misstated." The word "surplus" is still employed in financial statements in spite of rather influential pronouncements advocating the discontinuance of the use of this term.

Each chapter contains both questions and problems which appear to be more than adequate to provide the instructor with a satisfactory selection. Many of the problems are adaptations of questions from the Auditing Section of the Uniform CPA Examination.

In general, those who are seeking an auditing textbook which is substantially briefer than those previously available, but which still includes consideration of all significant matters should be pleased with *Basic Auditing Principles*. In addition to use as a textbook in classes in auditing, candidates for the Uniform CPA Examination should find this book useful in reviewing for the Auditing section of the Examination.

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Mary E. Murphy, *Accounting—A Social Force in the Community* (Melbourne University Press; New York: Cambridge University Press, 1956, pp. 208, $4.75).

This little volume with the ambitious title contains the addresses given by Miss Murphy during her recent Fulbright experience in Australia and New Zealand. A series of essays offers the reviewer special difficulties in the form of duplication, unevenness in breadth and importance, and general weaving around. A reviewer in this case is further harassed by discussions that cover the social aspects of no less than an entire profession. The reader may be interested first in whether or not the volume accomplishes its broad task of indicating the impact of accounting on modern industrial society. Miss Murphy's essays do reasonably well on this test, and she accomplishes her aims graciously through the device of explaining to the folks in Australia what accountants in America and Great Britain have been

doing to further industrial efficiency and organization. She avoids the obvious pitfall of being patronizing with the aid of a little well-placed flattery and with some first-rate summaries of what currently is going on in accounting.

The first essay—the Accountant's Viewpoint—is a combination of discussion with endless quotations that fortunately disclose Miss Murphy's feeling for the "happy phrase." The message is essentially an appeal for accountants to reduce their emphasis on year-end mechanics and on the narrow problems of verification and to stress accounting for managerial decisions, internal auditing, and budgetary control.

The second address—Dilemmas and Challenges in Accounting—rambles pleasantly from topic to topic without any fundamental contribution other than to point out to the Australians what topics are now being discussed in the intellectual drawing rooms of America and Great Britain.

The third essay deals with some relationships between accounting and economics. Miss Murphy turns out to be a practical, well-read economist of conservative persuasion. The discussion covers such diverse topics as the Keynesian revolution and the mechanics for handling treasury stock. This essay and the preceding one illustrate vividly one of Miss Murphy's apparent limitations—her inability to stop jumping from point to point and to sustain a step-by-step argument. The feeling of rambling and weaving may be due in part to the use of numerous quotations and endless lists. Most readers will have a feeling of reading from a well-documented compendium, but unfortunately there is also evidence that Miss Murphy may have sometimes forgotten to acknowledge the research and scholarship of others. For example, compare some of her statements on pp. 64–65 with those in *The Accounting Review* for July, 1952, pp. 329–330.

The following essay deals with the "Determination and Statement of Income." The emphasis is on presentation and on the matching of costs and revenues. This essay is followed by an address on the comparative features of income taxation in Great Britain and in the United States. The discussion of taxation in Britain contains some high-grade, sophisticated economic analysis. Unfortunately, the treatment of the American problem degenerates into little more than a simple recitation of the major provisions of our tax structure.

The following address concerns the "Rise of the Controller in Business Management." This essay contains a good modern explanation of what controllership means (or should mean) in a complex industrial society. The material is not new, but it is well written and well presented. Incidentally, Miss Murphy gets in a few good licks for accounting as a proper subject for study at the university level.

The concluding essay concerns the uses of accounting and modern management in the Australian economy. This is a good address that emphasizes the need for cost reducing devices in a country that must sell her products in the competitive world markets. Apparently, Australians are currently enjoying a measure of the "good life," but according to Miss Murphy some tightening of the belt is inevitable unless many of the accounting and managing tricks of the trade are applied to the problem of the cost reduction. When she deals with these points, Miss Murphy takes on the robes of an evangelist and presents a convincing plea for the adoption of modern accounting methods and attitudes. And make no mistake about it, she is thoroughly familiar with the methods and attitudes that she is advocating.

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John J. W. Neuner, *Cost Accounting*, Fifth Edition (Homewood, Illinois: Richard D. Irwin, Inc., 1957, pp. xix, 944, $7.00).

The fifth edition of John J. W. Neuner's *Cost Accounting Principles and Practice* is an excellent, well prepared text first issued in 1938. Although it follows the same general pattern as the earlier editions, certain previously included materials have been eliminated and useful chapters have been added on some recent developments in cost accounting. With the addition of chapters and the subdivision of others, the fifth edition contains twenty-nine chapters as compared with twenty-three in the fourth edition. Users of the text will find most of their favorite topics included in the 944 pages.

The text is divided into four major sections: basic cost accounting principles, process cost accounting principles, managerial control, and special applications of cost accounting procedures. The first three sections present little that is unusual in approach and coverage.

Section I, "Basic Cost Accounting Principles, Practices and Procedures," introduces the student, in two chapters, to the field of industrial accounting and its basic terminology. Chapters 3 and 4 give an unusually teachable presentation of the overall picture of the cost accounting cycle and of accounting records for a job order cost system. They also present the student with some needed orientation. The remaining seven chapters treat materials control, accounting for labor, applied manufacturing overhead, departmentalization of indirect manufacturing costs and cost summaries and statements.

Two comments on Section I are in order. First, Chapter 7, "Accounting for Labor in Cost Accounting, Part I Financial Accounting," appears to add little to the information that the student should have obtained in more elementary accounting courses. This subject might well have been given more summary treatment. Second, the treatment of the collection and recording of actual manufacturing overhead costs is made conspicuous by its brevity. However, enough attention is given this topic to provide a basis for classroom explanation by the instructor.

Section II, "Principles and Practices of Process Cost Accounting," is a good presentation of the process cost method. After covering basic principles, Neuner gives special attention in Chapter 13 to the weighted average cost method of treating the initial work in process inventory. In Chapter 14 he gives equal attention to the First-in, First-out method; however, he fails to men-

tion the problems involved in the use of the Last-in, First-out method. Because of the nature of the materials, illustrations are quite lengthy and involved and may give the student difficulty unless he receives careful explanation from the instructor. No new ground is broken by Chapter 15 which presents the orthodox treatments of accounting for co-products, joint products, and by-products. Chapter 16 provides an unusual concluding chapter for Section II. It presents detailed illustrations of cost procedures for cement manufacture, brick manufacture, foundry operation, lumber production, and flour manufacture. This chapter provides a unique tool for review and consolidation of facts and procedures that the student has learned in the preceding four chapters.

Section III, "Managerial Control Through the Use of Cost Accounting Data and Procedures," develops managerial control theory and technique in eleven chapters. This section contains much new material and covers a wide array of topics. Chapter 17 on budgetary control leads the student through budget preparation and the problems involved in preparation and use of flexible budgets. Chapter 18 on estimated cost accounting procedures is designed to cover a form of "predetermined costs" used by firms which must calculate their costs in estimated form in advance of the actual manufacture of the goods or the completion of a special construction contract for the purpose of subsequent comparison with actual costs. This chapter should provide an introduction to the series of chapters on standard costs that follow. Chapters 19 and 20 provide the usual treatment of standard costs for materials and labor and for manufacturing overhead. Chapter 21, "Accounting Procedures for Standard Costs—as Operating Data—Expected Actual Standards," covers in detail the procedures for recording standard costs as operating data using first a seven variation account approach, followed by a five variation account technique. The chapter is well illustrated, but careful explanation in the classroom will be needed. The final chapter on standard costs covers procedures to be used when memorandum data with basic or measurement standards are desired.

Chapters 23 through 26 provide much material not found in the fourth edition and represent the greatest effort of the author to bring his book up to date. These chapters, which emphasize direct costing, cost-volume-profit studies and break-even charts, and differential and comparative cost analysis, cover the procedures and techniques involved quite satisfactorily. Chapter 23 introduces the student to these topics through discussion of various uses of accounting data and graphic presentations to management. Chapter 27 provides the usual treatment of marketing and distribution cost and is the concluding chapter of Section III.

Section IV will be considered by some readers as rather anticlimactic. Special applications of cost accounting procedure turn out to be non-manufacturing cost accounting applications and uniform cost accounting systems. These last two chapters may be omitted without great loss if the pressure of time does not permit their coverage.

The questions and problems in the text have been increased in number and changed in an adequate number of cases. They provide realistic and well diversified material, ample for both homework assignment and classroom illustration. CPA problems are fitted into the problems that follow each chapter.

The book will probably be as well received as were the earlier editions. Those who have found Neuner's earlier editions satisfactory should find the latest edition even more satisfying.

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Charles F. Schlatter and William J. Schlatter, *Cost Accounting*. Second Edition. (New York: John Wiley & Sons, Inc., 1957. pp. ix, 725, $7.25)

It is refreshing to find a cost accounting text with emphasis on theory and conceptual understanding rather than on cost bookkeeping. The senior author in the first edition achieved this goal in a remarkable way and as a result the present edition has been strengthened. The influence of Professor William J. Schlatter can be seen throughout the book.

The organization of the second edition adheres essentially to that of the first. But some notable changes have been made. For example, the chapter on departmental accounting for the trading concern has been dropped "because most of it was only indirectly relevant to the subject of industrial cost accounting."

In the first chapter the student is introduced to cost accounting. From there the discussion proceeds to an elementary treatment of process cost accounting. This seems both proper and logical. The dominant method of production in American industry is that of the process type. It is only natural, therefore, that process cost accounting is more widely encountered than the method which emphasizes the collection of costs by jobs. In view of this an early understanding of the process system seems desirable. Furthermore, it is likely that the value of a cost accounting system can be portrayed more effectively through process costing than through job costing.

In the next chapter the authors present an elementary introduction to standard costs which is an innovation long needed in cost accounting texts. Indeed, it may be that the early discussion of standard costs could effectively cover the subject somewhat more thoroughly than has been done in this edition.

Following the above is a more detailed treatment of process costing which, for all practical purposes, is limited to what may be called the "FIFO" method. Those instructors who wish to discuss the "average" method will need to supplement the text at this point.

In sequence, accounting for job costs, materials, labor, and burden is then presented. From this vantage point the authors proceed to a discussion of cost reports with emphasis on presentations geared to the needs of managers in controlling operations. Some discussion is then devoted to combinations of cost-accounting methods followed by a thorough treatment of budgeting and controlling burden and applying it to product. An ex-

tensive discussion of the effect of volume on costs and profits and of current standard costs is then presented.

A new feature of the second edition is found in the next chapter which deals with distribution costs. The last three chapters cover material on profits and losses resulting from price changes; spoilage, by-products, and joint products; and interest as a cost of manufacturing. Those instructors who prefer to discuss by-product and joint product accounting in connection with process costs may find it desirable to refer to Chapter 23 after completion of Chapter 5.

At the end of each chapter will be found a set of problems and discussion questions. In total, there are 117 problems, some easy, some difficult, some short, some long. No practice set accompanies the text, although Problem I of Chapter 7, Problem I of Chapter 8, and Problem I of Chapter 9 constitute a short job practice set. The omission of a practice set stems from the authors' belief that time may be utilized on conceptual material more effectively than on the more mechanical aspects of bookkeeping.

A solution manual accompanies the text, and the solutions seem to be accurate and suitably presented. A different system of referencing between the textual problem and the solution might have made the mechanics of using the manual somewhat easier.

The treatment accorded flexible budgets does not give attention to the preparation of a budget when all indirect manufacturing costs have not been clearly separated into fixed and variable costs. But the authors defend this by saying "that most, if not all, costs commonly referred to as semi-variable may, with proper analysis, be broken down into their fixed and variable components." Many cost accountants may feel this is easier said than done.

Conventional terminology such as "profit and loss," "surplus," and "reserve" for depreciation has been used throughout. Perhaps it would have been better in this edition to have adopted different terminology to conform more closely with changes being accepted, even though slowly, by the profession.

As in the previous edition, practical capacity has been stressed as the proper basis upon which to establish a burden rate. The authors are to be commended for their forthright stand even though many cost accountants favor average or expected activity. The reviewer believes that practical capacity has not yet been satisfactorily defined and that practical capacity may be more difficult to determine in a real situation than has been indicated in the text.

The authors have changed their treatment of allocating purchased power costs to departments when the minimum bill applies. The treatment accorded this cost in the first edition recommended allocating the cost in excess of the variable portion in the ratios in which the departments failed to consume power. This edition recommends allocating such excess "in the ratios of their failure to consume their shares of power for the minimum charge."

Direct costing has been dealt with in Chapter 16, and the authors take a positive stand that although the omission of fixed costs from product costs may aid in some managerial decisions, such "exclusion of fixed costs from costs of product is incorrect in theory no matter what arguments of expediency may be advanced for it."

Stressed throughout the book is the usefulness of cost accounting as a managerial control device. The authors have achieved this difficult task in a very satisfactory manner by weaving "control" throughout the text rather than attempting to segregate cost control from cost bookkeeping, as if the two were not mutually interrelated. This stress on control has been accomplished throughout without sacrificing the important techniques which "a manager needs to know enough about . . . to understand the significance and limitations of the analyzed data reported to him."

In conclusion, this text is indeed a scholarly achievement. It is well-written and well-illustrated. Errors have been kept to a bare minimum. Both teachers and students of cost accounting will find the book stimulating and challenging, but those who want only a mild exposure will find this work will require more than such an exposure presupposes. Practitioners will find it useful for reference and for insight into the theoretical structure underlying cost accounting. The book deserves a warm reception and wide adoption.

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GLENN A. WELSCH, *Budgeting: Profit Planning and Control* (New York: Prentice-Hall, Inc., 1957, pp. vi, 487, $10.60).

This is an elementary text in the field, aimed (to use the author's words) at providing "suitable materials for a formal course in either accounting or management; consideration of special or unique situations and the intricacies of cost accounting and standard costs have been kept to a minimum." The scope of the work is further specified by the assignment schedule on page 377, which offers three alternative arrangements for a 45 meeting course: (a) Maximum, with practice set, (2) Minimum, with practice set, and (3) Minimum, without practice set. Of the seventeen chapters, it is suggested that three may be omitted without affecting the continuity of the course; this would presumably fit the material into a quarter system. These three chapters, however, are: 14, Analysis of Budget Variations, 15, Budgeting and Standard Costs, and 16, Budgetary Procedure for Non-Manufacturing Firms.

Presentation is made at the most elementary level. The table of contents lists 73 schedule forms and 40 illustrations; one cannot help but be impressed with the effort put forth by the author to reduce his material to the simplest basis. However, there are occasions when these efforts pass the point of diminishing returns. For instance, there are graphic illustrations (pp. 90–93) to indicate the relations between sales, production, and inventories. The compromise finally reached is not really worth the effort expended to comprehend the charts, for the choice is none too clear either in terms of results or criteria. This is an important problem, and

it deserves careful treatment; but the author's presentation does not clarify the situation for the reader.

The discussion of Cost-Volume-Profit Relationships is another example. The author specifically assumes "absorption" costing (p. 272) then proceeds to compute a break-even point on two bases: (a) assuming that there is no change in inventory, and (b) that the "percentage inventory change is *constant* all up and down the volume scale." Assumption (a) is really the "direct costing" approach—i.e., fixed costs in inventory are ignored. However, the book makes no specific mention of this. The computation is handled by "adjusting sales and variable costs to the same volume," to arrive at a break-even point of $138,462. Case (b) is dealt with by subtracting the fixed costs that would be capitalized in inventory from the total fixed costs; this gives a break-even point of $126,154. Then, quite gratuitously, the author assumes the same facts except that budgeted sales are higher, and there is a *decrease* in inventory: the computation now yields a break-even figure of $150,769. Evidently the break-even point depends upon by whom and how the breaking is done! To make the situation worse, two of the above figures are "proved" by alternate calculations, and no attempt is made to resolve the confusion.

The book abounds with lists and sub-heads that are intended as aids to memorization; but these lists, too, sometimes get out of hand. For example, under the caption "Fixed Costs Defined" (p. 160) appear the following italicized items as "minimum criteria for determining a category of fixed cost":

(1) Controllability	(2) Relationship to Activity
(3) Relevant Range	(4) Management Regulated
(5) Time Costs	(6) Fixed in total, but variable per unit
(7) Practical Application	

This list has obvious deficiencies from the standpoint of English expression; but aside from this, the text under these headings makes it difficult to see what the *criteria* are. Under 6 appears the sentence: "The total cost remains constant at $1,000 irrespective of the quantity produced, whereas the unit cost changes *proportionally* with volume." Obviously, the author meant to say something different from "proportionally," but the student would not necessarily know this.

The author has tried very hard to make each item in the presentation tie in closely with the rest; the device used for this purpose is the extended illustration covering the entire budget procedure for typical company. However, in his attempt to be exhaustive, there sometimes appear schedules of doubtful value. For instance, page 215 shows a schedule of five money columns and 8 lines with spaces for reference and subcaptions, and in this schedule $100,000 appears twelve times. Nothing else is in this schedule except a footnote: "$100,000 60 day 6% interest bearing note, dated March 1, 1956, due April 30, 1956." The footnote says more than the entire schedule! Further, on the following page appears a similar form in which 5 money columns and 8 lines indicate that the $1,000 interest charge implied by the footnote would be divided equally between March and April!

There are occasional slips of the pen that somehow get into the best of all books, but which ought to be caught when editing is done. Some of these are:

> The final review is to assure that the overall plan is a coordinated plan, one that represents a challenge to the firm, and yet is attainable in most, if not all, respects. (p. 38)
>
> Although the budget procedures in a particular situation should be conditioned by the accounting system used, i.e., job order, process cost, standard cost, direct costing, and so forth, budgeting is a distinct and separate technique. (p. 5)
>
> It is important to note that nothing detracts more from the effectiveness of budgeting than completion and distribution of the budget several months after the period has started. (p. 37)
>
> On the other hand, purchases could be at a uniform level only if inventory were allowed to absorb factory raw material requirements.(p. 107)
>
> Valuation reserves represent retention in the firm of funds required to keep the original investment intact. (p. 222)
>
> The budget director should insist that the planning budget be appropriately bound with a simple but well-designed cover. (p. 227)

There are 94 pages of problems, collateral reading assignments, and practice set material. These should be very valuable in implementing the use of this book.

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Economics

National Bureau of Economic Research, *Suggestions for Research in the Economics of Pensions* (New York: 261 Madison Avenue, 1957, pp. 51, $1.00).

The report of an Exploratory Survey of the Economic Aspects of Organized Provisions for the Aged and Surviving Dependents does not present suggestions for research on all problems of the aged but is limited to studies in the economic aspects of pensions. There is no reference to related demographic, medical, sociological or psychological problems. The stated purpose is only to draw attention to those economic problems in which research may be most fruitful.

Pensions are defined broadly to include the old-age retirement, survivorship and disability features of the following programs: old-age and survivors insurance, railroad retirement, public assistance, federal payments to veterans, retirement programs for federal, state and local government employees, private pensions. This definition is extremely broad and encompasses all the organized or group programs designed to provide retirement income. Estimates of the current magnitude in such terms as numbers covered, recipients of benefits, value of payments and of assets are given. Omitted is consideration of the provisions made by individuals on their own behalf through annuities, insurance, savings, and profit-sharing plans. While individual provisions are

significant in consideration of the total subject of financial planning for old age or disability, the individual freedom in determining the type of provision precludes such programs from consideration in this report.

Organization of the report is under five main headings:

- Present and future scope and characteristics of pension plans.
- Impact of present and future pension plans on savings and investment.
- Relation of present and future pension plans to the level and distribution of national income and product.
- Pensions and economic stability.

These headings indicate clearly the general areas of analysis for those interested in a particular aspect of the economics of pensions. References to existing studies in each area are limited although the literature on pension is voluminous and selection of references difficult. Consistent with the stated purpose of producing an exploratory survey, description is minimal; emphasis is on terse but excellently stated summaries of substantive areas in which research is needed and potentially fruitful. Perhaps of greatest interest to accountants will be the suggestions for research on the effects of pensions on labor mobility (pp. 41–43) and on the tax treatment of pensions and the aged (pp. 50–51). The broad nature of the problems suggested for study is illustrated by: "The revenue and distributional effects of the special tax provisions applying to the aged: (a) the additional exemption; (b) the special medical deduction; (c) the retirement income credit."

The report is excellent, authoritative and packed with research ideas and suggestions. Anyone contemplating or conducting research in the economics of pensions would be well advised to give it thorough study.

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Electronics

R. HUNT BROWN, *Office Automation*, Revised Edition, (New York: Automation Consultants, Inc., 1956, pp. xvii, 296, $25.00, annual updating service $25.00.)

Office Automation, according to the foreword, is a non-technical work on office electronics prepared especially for the business man. Intended as a manual for executives, university students, and equipment manufacturers, it deals with (1) commercial aspects of automation, (2) hardware, (3) electronic and automatic accounting, (4) sociological aspects, (5) new scientific techniques, and (6) potential applications. Brown's method is to give a comprehensive, broad-brush treatment of the field by dealing in facts not blue sky and, in effect, cover the entire field of data processing.

The reasons for adopting new equipment and techniques, according to the first section, are higher labor costs and inefficiencies of manual and paper operations, demands of complex and centralized business for information, and fear of a competitor gaining advantage by earlier utilization. The conflict is not resolved, however, between (1) the danger of waiting because developments are rapid, and (2) lengthy development periods—two systems were said to involve eight and thirty years of development. The pioneering of several years ago is said to be beginning to pay off now, but "pay-off" is never dealt with explicitly. Application examples are drawn from both office and factory.

Section two, the longest (180 out of 283 pages) deals with new machines for office automation and their use. Half of this section covers native-language and common-language (five or more channel paper tape producing and using) machines, communication facilities, and tabulating and computing equipment. The other half of this section covers electronic business computers, available equipment (52 pages including, however, a number of systems only in prototype), memories, printers, programming (merely touched on in three pages), what equipment will and will not do, rent-buy question, literature available, and conferences and meetings.

Section two is replete with 166 illustrations, chiefly photographs or artists' renditions of proposed equipment, and diagrams, which give a good feel of size and appearance. Operating descriptions seem to be rewrites of company semi-technical and sales literature covering components, speed, and price. Direct quotes from company literature result in such jargon as, "This medium size computer . . . is of the series parallel, binary coded decimal, internally programmed, fixed point, single address type . . . " (p. 132). These phrases have standard meanings but are not explained. Only one of these features (binary arithmetic) is even listed in the index (there is no glossary) to serve as a guide to the uninitiated.

Section three spends eight pages on electronic and automatic accounting and its implications. Electronic equipment is replacing semi-automatic or electromechanical because it is *believed* (p. 206) it will be less expensive to operate and will produce intangible benefits of better service to customers and more accurate and up-to-date management reports. The ultimate for electronic and common-language equipment is an instantaneous or automatic accounting system. Brown does not deal with the merits and demerits of instantaneous accounting, but names five companies with automatic systems in operation. Actually, each system deals with only a small, though critical, part of a company's accounting problems. Only two of the five systems are "instantaneous," in any operational sense of the word, because further processing is required or results must be accumulated for some finite time interval to be meaningful.

The remaining three sections touch briefly on a wide variety of topics including social consequences, operations research, applied cybernetics, and prospective

computers and applications. Extensive treatment is given to developmental applications in the banking area. However, the treatment of a number of topics in these sections tends to be superficial. Brown frequently ignores his stated intention to deal with hard, basic facts and to avoid blue-sky thinking.

Brown's generalizations concerning implications and consequences of new developments are not nearly so good as his descriptions and illustrations of equipment. Perhaps he should concentrate on equipment and its applications where, in fact, much of the updating service to his privately published loose-leaf book is concentrated.

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EUGENE M. GRABBE, Editor, *Automation in Business and Industry* (New York: John Wiley & Sons, Inc., 1957, pp. xix, 611, $10.00).

Accountants are not the only group who are having trouble keeping up with developments in the fast moving field of automation. When UCLA announced an extension course for the purpose of reviewing for engineers and management the present status of developments and applications in the field of automation over 700 attended. As a result of this show of interest, it was decided to ask the lecturers (each of whom gave a full evening's presentation) to extend and prepare their remarks for publication.

Too often the publication of conference proceedings, or a series of lectures, is an unsatisfactory substitute for attendance. In this case, however, the authors have carefully reworked their material and added considerably to it. A large number of illustrations and diagrams have been included. The result is something akin to a handbook with the following authors and sections:

"Preface," by E. M. Grabbe.

"Foreword, Reflections on Automation," by L. M. K. Boelter, Professor of Engineering, Dean, College of Engineering, University of California, Los Angeles.

"Automation in Business and Industry," by Simon Ramo, Executive Vice-President, The Ramo-Wooldridge Corporation, Los Angeles, California.

"The Language of Automation," by E. M. Grabbe.

"Fundamentals of Automation," by John L. Barnes, President, Systems Laboratories Corporation, Los Angeles, California, and Professor of Engineering, University of California, Los Angeles.

"Feedback Control Systems," by Harold Chestnut, Project Engineer, Aeronautic and Ordnance Operation, General Electric Company, Schenectady, New York.

"Basic Concepts of Industrial Instrumentation and Control," by Herbert W. Ziebolz, Vice-President in Charge of Engineering, Askania Regulator Company, Chicago, Illinois.

"Analog Computers," by Stanley Fifer, President, Dian Laboratories, New York, New York.

"Digital Computers," by Willis H. Ware, Assistant for Engineering, Numerical Analysis Department, The Rand Corporation, Santa Monica, California, and Visiting Associate Professor of Engineering, University of California, Los Angeles.

"Data Processing," by John W. Mauchly, Director, UNIVAC Applications Research Center, Remington Rand UNIVAC, Division of Sperry-Rand Corporation, Philadelphia, Pennsylvania.

"Analog-To-Digital Conversion Units," by Bernard S. Benson, President, Benson-Lehner Corporation, Los Angeles, California, and George G. Bower, Systems Engineer, Riverside Research Laboratory, Motorola, Inc., Riverside, California.

"Input-Output Equipment," by Walter F. Bauer, Head, Digital Computing Center, Computer Systems Division, The Ramo-Wooldridge Corporation, Los Angeles, California.

"Applications of Electronic Data-Processing Machines," by Cuthburt C. Hurd, Director of Electronic Data Processing Machines, International Business Machines Corporation, New York, New York.

"Automatic Control of Flight," by Duane T. McRuer, Control Specialists, Inc., Inglewood, California.

"Automatic Production of Electronic Equipment," by L. K. Lee, Technical Advisor to Director, Engineering, Research and Development, Mechanical Division, General Mills Inc., Minneapolis, Minnesota, formerly Manager, Advanced Techniques Laboratory, Stanford Research Institute.

"Process Control in the Petroleum and Chemical Industries," by C. G. Laspe, Member of Technical Staff, the Ramo-Wooldridge Corporation, Los Angeles, California, formerly Chief Instrument Engineer at Shell Oil Company, Wilmington Refinery, Wilmington, California.

"Analog Computers in Industrial Control Systems," by E. L. Harder, Director, Analytical Department, Westinghouse Electric Corporation, East Pittsburgh, Pennsylvania.

"Digital Control of Machine Tools," by John L. Bower, Engineering Specialist, Autonetics, Division of North American Aviation, Inc., Downey, California.

"Manufacturing Automation," by Roger W. Bolz, Editor, *Automation*, Penton Publishing Company, Cleveland, Ohio.

"The Economics of Plant Automation," by Frank K. Shallenberger, President, Shalco Engineering Corporation, Palo Alto, California, and Professor of Industrial Management, Graduate School of Business, Stanford University, Palo Alto, California.

"The Future of Automation," by Dean E. Wooldridge, President, The Ramo-Wooldrigde Corporation, Los Angeles, California.

As can be seen from the above list, though data processing was considered, the emphasis was on factory automation and automatic control. The book will be of most interest to accountants who work for medium and large scale manufacturing and distribution companies. The major emphasis throughout the book is on the recording and processing of information.

Now that machines can be controlled by magnetic tapes carrying digital data, and accounting records can be stored on and produced from the same type of tapes,

the day must be nearing when the two systems will be integrated. This integration of data means that accountants who expect to understand and audit automation will have to extend their knowledge at least as far as the general descriptions which these authors have provided.

Ramo, Wooldridge, and Grabbe are editing a more complete "Handbook of Automation, Computation, and Control," which will also be the work of many contributors. The careful editing and clear presentation of the material in the present volume raises the hope that the more complete work will provide a much needed reference handbook in this new area.

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General

CHESTER REED ANDERSON, ALTA GWINN SAUNDERS, AND FRANCIS WILLIAM WEEKS, *Business Reports: Investigation and Presentation* (New York: McGraw-Hill Book Company, Inc., 1957, pp. vii, 407, $6.00).

Since Chester Reed Anderson has long been regarded by his professional associates as the most authoritative voice on business report writing, the appearance of this third edition of the Saunders-and-Anderson text meets an expectant audience. The original edition, in 1929, answering the demands of the revved-up business and its economic peaks of the Roaring Twenties, was the first college-level text in the field of business reports. It set the pattern for most of the advanced college and university courses for two decades.

The third edition, with Francis W. Weeks as collaborator carrying on for the late Professor Alta Gwinn Saunders, is the Illinois authors' answer to needs of management in another high plateau of the economic cycle. Although it holds the original basic pattern of thorough study of the analytical report instead of a wide scatter of variant types, it includes two useful chapters on Day-to-Day Reports—and places them near the beginning (instead of at the end, as formerly) for the teacher's use in leading students from easier to harder problems.

The teacher of report writing will note that the earlier extensive chapter on statistical research procedures has been revised into a shorter, very readable chapter on "What to Do with Figures"; and the treatment of style covers a chapter of fundamental report language and another that digests the "readability" formulas into a workable guide without going overboard on this one phase. The continued emphasis is on sparseness—speed and conciseness in getting the idea over—and on a "clear, objective, natural writing style." Investigation and presentation are still the major footings; and the chapter on organizing and interpreting data and the standard four chapters devoted to the formal analytical report are still the backbone of the work.

The style of writing in the book itself will stand out most strikingly as the teacher or user of former editions reads this bright new one. In an almost total rewriting, the authors have put their "readability" studies into practical demonstration by their conversational style. The second person is the predominant viewpoint, with the use of the friendly imperative to tell the user just what to do. But the authors stand on the fundamental position that the personal style is not usually acceptable in the formal report.

The practicing accountant whose increasing services to management require a variety of reports "that do not sound as if they were written by an accountant" will find live, strictly current, and authentic illustrations and analyses in this edition. The report-writing teacher will find the work flexible and adaptable to his preferred pattern and will welcome the thirty-page appendix of some forty classified, detailed report problems as a life-saver.

The long experience of the authors explains the authoritative place of this book in the business-report-writing field. Professor Anderson, Chairman of the Department of Business English at the University of Illinois, has been teaching reports and other forms of business writing for more than thirty years. He was a founder of American Business Writing Association and served as its executive secretary for twenty-one years, until his retirement from that office last year. Associate Professor Weeks has likewise taught at the University of Illinois many years and succeeds Professor Anderson as executive secretary of ABWA.

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ROBERT N. ANTHONY AND SAMUEL SCHWARTZ, *Office Equipment: Buy or Rent?* (Boston Management Analysis Center, Inc., 1957, pp. ix, 92, $15.00).

The *United Shoe Machinery Company* case is probably a precedent for the consent decree in the *International Business Machines Corporation* case, since the latter also involved the establishment of selling prices for equipment which formerly only had been rented. The procedure worked out in this study is applicable not only to IBM equipment but also to any other type of office equipment which can be acquired either by purchase or by a level monthly rental payment. The problem presented is stated as "Having decided to acquire a piece of office equipment, should it be acquired by outright purchase or by rental?" It is basically a problem of *investment*. The essential quantitative factors that must be considered are (1) *the earnings rate* to be used—which is considerably higher than the normal interest rate on loans, (2) the *estimated useful life* of the equipment, which is the shortest of its physical life, its "application life" and its technological life, and (3) the *costs involved in buying and in renting*, which includes both the acquisition costs, and the periodic costs. Income taxes are considered as a part of the regular costs because otherwise misleading results may be obtained.

Since the approach to solving this problem—buy or rent—is basically one of investment, it excludes the

question of whether or not any particular piece of equipment should be acquired at all. Special consideration must be given to the purchase of used equipment. In the study of this problem each item of equipment is considered separately. It is not assumed that all equipment will be purchased, nor that all equipment will be rented. Only the quantitative factors are considered in answering the question, and it is admitted that these objective factors are not the total solution. The quantitative factors which must be considered are the *future* and the *differential* costs of buying versus renting, the *required earnings rate* and the influence of the *useful life of the equipment*. Of particular emphasis is the earnings rate of the business operations—not the loan or investment earnings rate. Due consideration is given to the present value of the future rental payments.

On the basis of the foregoing introductory remarks it is believed that a general outline of the discussion is appropriate at this point: (1) A chapter on the *required earnings rate* which emphasizes the difference between earnings rate and interest rate; how to determine the earnings rate; the purchase risks including those of premature obsolescence, and the impact of income taxes. (2) A chapter on the *future life of the equipment* which makes a careful distinction between physical life, application life, and technological life, with due consideration of the problem of buying used equipment. (3) A chapter on the *cost considerations*, with the necessary distinction arising from the *differential costs* of buying versus renting, and the cost consideration in an inflationary economy. (4) In addition to the chapters listed, a separate chapter is devoted to income tax considerations including such items as deductible expenses, depreciation, interest, rental payments, capital gains and when to disregard the tax factors. (5) Two chapters are devoted to the methods of analysis: one a short cut method, and two illustrations of the detailed method. (6) The final chapter discusses such special considerations as purchase on the instalment plan; rental with the option to buy; rent some and buy some; and finally, buy now versus buy later.

In reading the preceding summary, one realizes that the authors have made a careful analysis of an excellent managerial problem. The accountants, the controllers and the office managers of every business firm having large investments in office equipment (and, in fact, manufacturing equipment as well) should examine carefully the economic, the financial, the taxation and the earnings problems which are involved in this study. It is thoroughly and soundly presented in simple and easily understood language and illustrations.

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Dwight R. Ladd, *Cost Data for the Management of Railroad Passenger Service* (Boston: Harvard University Graduate School of Business Administration, Division of Research, 1957, pp. xvi, 345, $4.50)

The broad question with which Professor Ladd's book concerns itself is the passenger deficit and the extent to which cost data can shed some light on ways of dealing with it. Coming at the very time the Interstate Commerce Commission has launched a general investigation of the Railroad Passenger Train Deficit, Docket 31954, the book is most timely.

Exception is taken to the title of the book; more precisely, it is suggested that "and" be used in place of "for" in the title. This is not a "do-it-yourself" manual for management but, rather, a well written comprehensive report representing several years study of the cost concepts and cost finding techniques (or lack of same) on a dozen large American railroads. Non-railroad and non-management as well as railroad readers should find the book of interest.

The first three chapters are of an introductory nature. The reasons for considering costs, the context in which cost is considered, the nature of the research and plan of the book are set forth. The working environment of the railroads as it appears to influence the cost control function is discussed under three major categories: 1) Physical, 2) Organizational, and 3) External. Included under the latter are regulation under law, intra-industry regulation and regulation by public opinion.

Chapter IV traces the origins and development of the Uniform System of Accounts prescribed by the Interstate Commerce Commission. It is effectively shown that what is treated as "solely related" expense on one railroad may not be considered such on another. This is not news for railroaders familiar with the processes and figures but may be a revelation not only to the general public but to a number of academicians who are wont to use "solely related" as out-of-pocket cost on any and all roads. This chapter emphasizes the importance of the availability of "building blocks"—the basic elements of costs—in order to develop cost data for any particular purpose. It is the author's opinion that the building blocks resulting from the uniform accounting system are far from satisfactory for accurate cost analysis.

Chapters V through IX discuss a number of specific applications of the use of cost data by different railroads. These are discussed in the light of different problems such as the use of cost data in (1) maintaining control over regularly scheduled operations, (2) evaluating the profitability of special train operations, (3) appraising the potential results of the abandonment or curtailment of train service, and (4) determining the over-all cost of passenger service.

Chapter X considers the problems of personnel and organizations maintained by the railroads for the development of costs. It is the author's conclusion that the railroad cost finding or research organizations outside the regular accounting departments have been doing more skilled and more imaginative work. This is so because they were set up with an express purpose and not merely because they are outside the accounting departments.

Chapter XI is entitled "conclusion" and is perhaps best characterized by the following summarization of

suggestions for future action in the author's own words:

1. Substantially larger numbers of people who have training in and experience with modern analytical techniques must be brought into the industry.
2. Information on the costs of specific functions incurred in specific cost centers should be made readily available.
3. The summary classifications of the accounting system should be revised to meet as nearly as possible the needs of management.
4. The thinking about costs must go beyond the cost of individual trains and the cost of passenger service and include the costs of groups of trains, of specific services, of moving passengers, of other nonmovement services provided to passengers. No universal formula can fit all these cases.
5. Management should not be burdened with data prepared in the standardized forms required by regulatory authorities. Preparing data for management and preparing data for regulatory agencies are not the same jobs and they should be separated and made distinct.

In retrospect, Professor Ladd has found that the railroads know more about costs than has generally been thought. On the other hand, there is considerable room for increased knowledge of costs and the development of differing cost concepts to fit different situations. This cannot be achieved working within the confines of the present ICC accounting procedures. It will call for adoption of modern analytical techniques which in turn implies use of personnel trained in these techniques. Within the industry there are more and more evidences of movement in this direction. Professor Ladd's suggestions for future action are disappointingly general as can be seen in the above listing; nevertheles, his analysis of the present costing systems and cost concepts should be of intense interest to railroad management.

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Tax

Tax Planning Under the New Regulations (New York: The Journal of Taxation, Inc., 1957, pp. v, 194, $4.95.)

Subtitled "14 analyses showing how to minimize taxes today," this volume is the complete text of fourteen papers prepared for the Texas Society of Certified Public Accountants' third institute on taxation, held at the University of Houston in November, 1956. The articles range in length from nine to twenty pages and, as might be expected, vary somewhat in method of organization, literary style, and extent of referencing to the code, administrative interpretations, and court decisions.

Four of the articles will be of interest primarily to accountants and lawyers located in major oil and gas producing regions. They deal, respectively, with oil and gas production payments and carved-out payments, mineral operating agreements and partnership elections, oil and gas depletion problems related to aggregations of properties, and the taxation of carried interests in oil and gas operations. An article on the tax advantages of the limited partnership form of organization relates specifically to Texas statutes, but is of general applicability to the thirty-four other states that have adopted the uniform act.

The other subjects included in this collection are as follows: compensation plans, with particular emphasis on stock-options; recognition of gain or loss on certain liquidations and treatment of collapsible corporations; avoidance of imputed dividends in distributions of corporate property; transferring net operating losses and other carryovers to acquiring corporations; analysis of the new partnership regulations, with particular emphasis on basis of partnership interests, basis of partnership assets, and basis of assets distributed to partners; new developments in accounting methods and periods; planning real estate operations, with particular emphasis on subdividing and sale and leaseback arrangements; the use of various types of trusts and the related income and transfer tax consequences; and the use of life insurance and annuities in minimizing taxes.

In most of the articles the author presents a brief comparison of the 1954 Code with the related provisions (if any) of the 1939 Code, followed by a more detailed explanation of the present law as interpreted by the regulations and the courts. The text is lucid and illustrative examples are used to good advantage. The usefulness of the volume as a reference work is enhanced by a topical index and indexes of cases, revenue rulings, and code sections. It is a worthwhile addition to the tax library.

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